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## ORIGINAL LECTURES.

### CLINICAL LECTURE

#### ON THE PORTAL SYSTEM:

ITS ANATOMICAL AND PHYSIOLOGICAL RELATIONS TO THERAPEUTICS, AND TO AFFECTIONS OF THE STOMACH, INTESTINES, LIVER, AND SPLEEN.

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GENTLEMEN: There are many climates, zones, and special localities where the liability of the liver and spleen to become affected is far greater than in others. These are tropical, semi-tropical, and malarial regions, and those subject to great variations of temperature. There are many conditions peculiar to the individual, or the people; habits of life, imprudences, excesses in eating and drinking, exposures to wet and cold, to miasmatic influences, etc., which lead to such affections. The liability to, and the ill effects of, these can be escaped if they are made known and explained, and we believe that this can be done so that it will be intelligible to the commonest mind. But to this knowledge, and as essential to a fuller understanding of the subject, it is necessary that there be added some acquaintance with the position, structure, and functions of the organs specially treated of in this lecture.

The first step in diagnosis is to have clearly in the mind's eye the several diseases to which an organ is subject. We will begin with the liver, and enumerate some of the affections to which it is specially liable, that some idea may be formed in advance of its morbid states, whether these consist simply in a temporary derangement or a grave disease of the organ. Either condition is always more or less obvious to the senses of sight or touch, or is indicated by the feelings of the sufferer. Among the most prominent of these are: Enlargement; congestion (acute or chronic); inflammation of the liver (hepatitis); gin-liver, hob-nailed liver of drunkards (cirrhosis); catarrhal affections of the stomach and liver; syphilitic disease of the liver; tumors, whether cancerous, fatty, or simple, and which, also, by their pressure upon its vessels, cause: Dropsy of the abdomen and lower extremities; watery enlargements of the liver (hydatids); bilious colic, caused by accumulations of gall-stones in the gall-bladder, or their forcible escape through its ducts, giving rise to acute pain. There are, also, various degenerations of the organ, fatty or other, with impairment of its size, structure, or functions.

*Causes of Diseases of the Liver.*—These states or forms of diseased liver are caused by, or result severally from: Excess in eating and drinking, which produce injurious fulness, repletion, or inflammation of the organ; malarial fevers, intermittent or remittent (so-called bilious); catarrhal affections, beginning in the stomach or intestines, and extending to the liver; contamination of the blood which circulates in the organ from the absorption of the matter of dysenteries or of syphilis. Sometimes attacks of jaundice of a very distressing character, and accompanied by extreme prostration, occur, without apparent cause, in special individuals; at times these are epidemic in their nature; at other times becoming frequent in particular localities—among bodies of troops, in camps, or during cer-

tain unfavorable atmospheric conditions. Tendencies derived from our progenitors, impurities of the blood, the poison of consumption (tuberculous matter) absorbed into the system, etc., manifest themselves by tumors, swellings, hardness, and other evidences of disease which affect this organ, in preference to others, for reasons which will be shown hereafter.

A form of dropsy (called hepatic) is not infrequent, caused by tumors, or interstitial growths in the substance of the liver, pressing upon its veins and squeezing out the watery parts of the blood, which thus accumulate in the cavity of the abdomen, or settle in the legs. The same condition results from gin-drinker's, or drunkard's, liver; likewise from diseases of the heart or kidneys, but when these are implicated the dropsy is often noticed in the face. It may also occur as a result of weakness following protracted fevers, when it is more amenable to treatment.

*Symptoms.*—The most prominent and ordinary symptoms of disease of the liver are: Swelling, enlargement, hardness, pain limited to a small space, or diffused over the whole organ (deep-seated or superficial); pain being sometimes felt in the shoulder. The pain is caused by inflammation, tumors, cancerous growths, abscesses, etc.

The above symptoms, or many of them, are accompanied by fever, nausea and vomiting, want of appetite, indigestion (dyspepsia), dejection of spirits or decided melancholy, a general failure of energy, and a disinclination to exertion, mental or bodily. The general hue of the skin, specially of the face, is what is called "bilious," the face being heavy and dull, as if stained with bile, and often slightly swollen or bloated.

We will now endeavor to show *why* it is that the liver is so liable to become diseased, why it has so important an influence upon other portions of the body, and also their intimate relations with it. In the popular view, and often we believe not without reason, the seat, or the offending cause, of very many of the ailments affecting mankind, and the origin of very many troubles, mental or bodily, are readily referred, whether correctly or incorrectly, to derangements of this organ. We may be allowed to say that, having long had our attention attracted to this subject, with ample experience in charge of hospitals at the South, and in teaching medicine to students at the bedside, we hope to be able to offer some explanations, and to point out the extremely important functions and relations of this organ, by a method which we have never seen presented fully by any writer.

This, the largest gland, or blood-making and blood-purifying organ in the body, lies in the very path, midway between the stomach and intestines and the heart and lungs. All the large vessels (veins) coming from the stomach and intestines, with scarcely an exception, unite in one trunk, and go into the liver; and this was, therefore, called by the ancients (who understood its importance) the Portal vein (*vena portæ*)—the great gate-way, or portal of entrance, into the system. It might well have been distinguished as the "Grand Trunk." The reason for the high importance of this central canal is, that it carries a rich stream of nutritive matter into the heart of the system. But there are, besides, anatomical and physiological considerations connected with it; and some diseases, with the production of which this canal is so intimately concerned that

we must briefly invite attention to an explanation of their relations.

The intestines of an adult of ordinary size, though packed away in a very small space, are over thirty-six feet long—or six to eight times the length of the body, and possess about 14,000 square inches of surface. They consist of an enormous glandular apparatus—secreting and excreting, but possessing no special absorbent vessels.<sup>1</sup> Over the entire stomach and intestines, throughout their whole length, there circulate countless myriads of veins (the gastric, superior and inferior mesenteric, and hæmorrhoidal), subdividing, ramifying, and encircling their walls—but these veins never penetrate through their coats, nor with open mouths dip into their interior. Through the walls of these veins, though at their origin infinitely small, is carried by imbibition—as water or other fluid will pass through the insensible pores of a membrane—all the food which has been swallowed, and which the solvent juices of the mouth, stomach, and upper intestines (those of the stomach being strongly acid) have *digested* and prepared for the nourishment of the body. We say that all—every portion of this highly nutritious material upon which our life depends (save oils and fatty matters)—having penetrated, by endosmotic action, into the interior of these numerous and widely disseminated congeries of veins, which converge into one channel (the portal canal), is carried directly to the liver. We can compare these veins, thus filled with nutritive material, to the countless rills which flow from mountain, plain, and valley, draining a wide campagna, and gathering the elements of fertility from every quarter, till they unite in one full stream, to pour into the ocean their rich and various stores.

When these products of stomach and intestinal digestion reach the liver, they undergo certain other digestive changes, which we need not describe fully or in detail, saying only that the starchy matters contained in the food, acted on by the diastase of the saliva and pancreatic juice, and changed to dextrine and sugar, are further converted in the liver into glycogen, a body allied to the dextrines, and again reconverted into sugar, which latter is serviceable in heating the body. The materials derived from flesh, meats, etc., which had been already digested, as was stated, in the stomach and intestines, go to make up the elements of the *blood*; they furnish what Dr. Gull, of St. Bartholomew, aptly calls the “raw material of the blood.” They then pass out of the liver to the vena cava ascendens, to reach the heart, from whence they are sent to the lungs (that they may be exposed, by a similar endosmotic action, to the action of the air), to be again returned to the heart. We all know that this is the great tireless central engine for forcing through the arteries this blood elaborated from the food, thus doubly enriched (by the nutritive elements of the food and by the oxygen of the air), and suited for the repair and nourishment of every portion of our frames. But before the blood has left the liver, bile had been extracted from it, a portion of which is retained in its proper reservoir, the gall-bladder, whilst a portion finds its way back into the intestines, to assist, after its own special manner, in the intestinal digestion, namely, in conjunction with the pancreatic fluid, the breaking up

and emulsionizing of fatty materials of the food, which ultimately passes into the thoracic duct, and reaches the heart by a different channel.

So that even the most un instructed need not be told now that those veins which go to the liver, as described above, are not, strictly speaking, *veins*, like the rest of the veins in the body, carrying dark, used-up blood to the heart, as, with a single other exception, all the veins do. These liver veins contain some of the very richest material in the body, gathered, as we have shown, from the food in the stomach and the whole tract of the upper intestines, which man has swallowed to gratify his natural and proper wants, or his greediness. If he habitually takes too much food, the liver is overtaxed as well as the stomach, and he becomes overfat, or suffers from enlargement of the organ, from dyspepsia, indigestion, headaches, etc.; but of this more anon.

It must be remembered that all this rich contribution made by the stomach and intestines to the veins which penetrate the liver, is not only *food* of every variety and description (with the exceptions made), digested flesh or fish, breads, vegetable substances, fruits, sweet and sugary matters, grains, etc., but besides all these, all the *fluids* we drink take the same course, and enter the liver with the other digested substances. These drinks may be and are, water, spirits, wines, syrups, and, be it observed, anything capable of solution by the juices of the stomach, or dissolved in the spirits, wine or water, namely, poisons or medicines—whether fluid or solid, mineral or vegetable, powders or liquids—all, save oily and fatty substances, pass straightway to the liver. A glass of wine or a cup of tea which has been swallowed, and which affects the head in half a minute, or the kidney in a very brief space of time, has passed through this portal vein, and has entered the liver to reach the heart. That wine may contain medicines or poisons, ingredients of any kind, beneficial, or hurtful—all take the same route through the liver.

We can now readily understand the vast importance of this great gland, or viscus, as it has been called, in the economy of the system, and what it has to do, whether healthy or diseased, with our food, our drink, our nourishment, or our *cure*, for through its instrumentality and grace to its marvellous functions, we depend upon it for health and strength, as well as for transmitting, and to a certain extent modifying, all the remedial agents which the physician, in his best judgment, deems necessary for the cure or relief of the sick.

In this preliminary narration of facts, which we hold to be essential to any proper understanding of the subject, we have also to state that both the stomach, and intestines, and the liver, each in turn, reciprocally react upon the other, and when the rules of life or the teachings of common sense are violated, or when disease invades one of them, the other is liable to suffer through means of this very circulatory arrangement—this interdependence which we have been describing. Thus, a cold falling on the stomach and intestines, and causing the pouring out of a large amount of mucus, or a dysentery (bloody flux accompanied with matter and disorganized blood), may impair or poison the blood which goes to the liver. Or, on the other hand, if the liver is diseased, enlarged, congested, it fails to give passage, as in health, to the blood, and the rich intravenous material which is taken to it, its channels of entrance or exit are blocked up, the blood flows back, and the said venous contents regurgitate, we may say, upon the already diseased, or the healthy stomach and intestines, causing congestion of them, deranging their own proper functions: giving rise to repletions, to indigestions, to looseness of the bowels, to dysentery, or other disturbance.

We may add that the spleen also suffers if the liver is blocked up, for the only other veins which go to the

<sup>1</sup> In M. Foster's Text-book of Physiology, 3d Eng. edition, 1880, he says of the “Entrance of the Chyle into the Lacteals:” “The lacteal begins as a club-shaped (or bifurcate) lymphatic space lying in the centre of the villus, and connected with the smaller lymphatic spaces of the adenoid tissue around it; it opens below into the submucous lymphatic plexus, from which the lacteal vessels spring. . . . That the finely divided fat does pass from the intestine, through the epithelial envelope of the villus, into the adenoid tissue, and so into the lacteal chamber, is certain; but much discussion has arisen as to the exact mechanism of the transit.” So whether there is true absorption, or osmosis, is uncertain.

liver with the stomach and intestinal veins are those which come from the spleen. So that we may remark, once for all, that the spleen is similarly liable to be affected by obstructive diseases of the liver.

Besides colds (catarrhs), dysenteries, and congestions of the stomach and intestines, which are caused or increased by diseased conditions of the liver, we must notably call attention to the extreme lower portion, likewise, of the bowels—the rectum and fundament. These parts of the bowel are enormously supplied with veins, of which the superior hæmorrhoidal enters the portal canal and goes to the liver. They bleed, consequently, when in trying to make their way through that organ their path is obstructed; the blood in them flows back, engorges, swells up the vessels of the lower intestines, and we have bleeding piles. We can readily understand, then, why, though the lower bowels and rectum are far removed from the liver, they sympathize thus powerfully with that organ, and how such medicines as calomel, blood-root (sanguinaria), mandrake (podophyllum resin), taraxacum, soda, epsom salts, etc. (which act upon the liver or the intestines by stimulating their secretions and thus emptying them), relieve dysenteries, colds of the stomach (catarrhs), dropsys, hæmorrhoids,—or other intestinal diseases caused by congestion or engorgement, or arising from whatever influences.

Medicines, or local means also, which act specially in emptying the lower bowels—aloes, epsom salts, etc.; the application of leeches, enemata, etc., naturally have the power of relieving plethora or engorgements of the liver. If the heart or lungs also are diseased or congested, the liver is unable to empty itself properly,—so that it also sympathizes with these organs.

Dr. L. F. Warner, of Boston, in a paper published by him and also in a letter to us, contends that portal congestion as a clinical fact always "intensifies if not causes pelvic congestion," and he advises medicines acting on the liver to relieve the uterus. Dr. Montrose Pallen is of the same opinion. It appears to us that the uterine organs discharge their venous blood much more fully through the vena cava ascendens, and thus escape much complication with the liver.

In "Gross's Journal," as far back as 1857, it was stated that sterility in women was often dependent upon fissure, hæmorrhoids, and disease of the rectum, because of their mutual relations with the uterus—both organs being supplied with blood from the internal iliac artery, and by the sacral plexus of nerves. A venous and arterial symmetry is generally preserved in every organ, and so we argue that the uterus is not emptied by the hæmorrhoidal or mesenteric veins.

The following is a very practical and popular consideration, to which we invite special attention on account of its exceeding importance in its effects upon the welfare of a very large number of persons. It flows, too, directly from the very explanation we have been offering. It is this: that the danger of our acquiring diseased livers, of their becoming overtasked and engorged—which, when they occur, we have shown to produce such widespread, remote, and disastrous effects upon the stomach, intestines, fundament, and spleen—depends upon the care we use with regard to *food and drink*. *First—of food*: Gluttony and continued excess, high living in the adult, overfeeding in the young, overtask the digestive organs, especially the stomach and the liver, causing colic, atrocious pains,<sup>1</sup> etc. The danger and the ill-consequences are greatest in hot climates and during the hot seasons of the year, when, as is notoriously the case, we find diarrhœas, dysen-

teries, cholera infantum, etc., much more prevalent and fatal. The remedy is obvious. We believe that continued excesses in eating—any habits approaching to gluttony or debauch—by overloading and overstimulating these organs, also intensify greatly the grade of bilious (remittent) fevers, and render them much less amenable to treatment by quinine, etc. This is because a condition of excessive irritation or plethora (and perhaps of inflammation) of the stomach, intestines, and liver, is added to what would otherwise have been simply an uncomplicated attack of intermittent (malarial) fever. Were it not for these excesses, organs so important would have been sound and healthy, and therefore more ready to respond to our remedial agents, and better able to resist and expel the poison causing the fever. In the irritation of the stomach, intestines, or liver induced by such over-indulgence will, we believe, be found the *exciting cause* of the attack; and though the resulting fever be malarial in its essence, it is the repeated and prolonged over-indulgence in highly spiced, stimulating, and rich food which aggravates it, and also renders it more difficult of cure—because we have the stomach or intestinal irritation added to the malarial poison to be eradicated.

*Influence of drinks; action of alcohol upon the liver.*—Excesses in the use of stimulants, liquors, wines, etc., in warm climates such as ours (at the South), are after all the greatest cause, overshadowing every other, and far more productive of evil than all the rest combined, in producing and intensifying the tendency to disease of the stomach and intestines, and especially the liver. All know how widespread and baneful is the habit—sapping literally the *life-blood* and destroying the health, strength, and happiness, moral and physical, of countless thousands. This is now easily comprehended; because when too great and long-continued indulgence in spirituous liquors is allowed, the liver especially, as the great organ for their passage to the heart and lungs, becomes inflamed, swollen, indurated (hob-nailed); the skin, lungs, heart, and brain become embarrassed; and the whole train of deplorable consequences ensue. What our distinguished friend, the late Prof. S. H. Dickson, remarked of one of the diseases met with here (yellow fever), we may justly apply to many others: "There is no hope for the drunkard!" The red, congested, and inflamed stomach and intestines, the swollen, bloated, or hardened liver sufficiently declare the dangers of such over-indulgence, especially to those living in hot and miasmatic regions. We shall be contented, if we are permitted thus incidentally to record our opinion of the extreme dangers of intemperance, whilst we show plainly the reasons for it.

## ORIGINAL ARTICLES.

### SUPRA-MALLEOLAR OSTEOTOMY,

FOR OUTWARD DEVIATION OF THE FOOT, SUBSEQUENT  
TO POTT'S FRACTURE HEALED UP  
IN A BAD POSITION.

BY CHRISTIAN FENGER, M.D.,  
OF CHICAGO.

(Concluded from p. 401.)

CASE III.—*Outward deviation of right foot of ten years' standing, from Pott's fracture—Operation—Five weeks later dressings removed—Seven weeks later can bear weight on foot—Complete recovery.* (Verity, Chicago, 1881.)

William B. W., a groceryman, fifty-three years of age, was admitted to Cook County Hospital, January 19, 1881, suffering from suppuration of the

<sup>1</sup> The famous bishop, Jeremy Taylor, says somewhat forcibly, in his "Holy Living and Dying": "Whereas to gluttony, the pain of watching and choler, the pangs of the belly, are continual company."



metatarso-phalangeal articulation of the great toe of the right foot, caused by frost-bite.

The patient has for many years been addicted to the excessive use of liquor. During the past year he has taken from ten to twenty drinks daily. He has had syphilis. Ten years ago, while in Colorado, he sustained a Pott's fracture, which, in default of proper care, healed up in a bad position.

On admission, the patient was found to be well nourished. The right foot was turned outward at an angle of about thirty degrees.

*February 22.*—After the usual course of treatment preparatory to an operation for the restoration of the contour of the limb, the patient was anesthetized with ether, and after the application of Esmarch's bandage, Dr. Verity, the house-surgeon, performed the operation. A longitudinal incision was made, beginning three inches above the internal malleolus, and extending to its extreme point. The soft parts were widely separated by retractors. A transverse incision was made through the periosteum, an inch and a half above the lower extremity of the tibia. Two longitudinal incisions, perpendicular to the first incision, were then made through the periosteum, making altogether an H-shaped incision. The periosteum was now carefully retracted, laying bare a portion of bone about an inch and a quarter long and half an inch in breadth. A base having first been marked out, a wedge-shaped piece of bone was cut out from the tibia with a hammer and chisel, the base of the wedge being inward, and the apex pointing outward at an angle equal to and compensating the angle of deformity. The cut ends of the tibia were now approximated and united by a heavy silver suture, the fibula having first been bored through in order to facilitate its fracture. A drainage-tube was inserted, the wound closed by aseptic silk sutures, and Lister dressing applied. Verity's modification of my osteotomy splint was now applied over a plaster-of-Paris cast, embracing the upper two-thirds of the leg and lower two-thirds of the thigh, the leg being flexed upon the thigh at an angle of about forty-five degrees, in order to give greater leverage, and prevent rotation of the foot, and the leg suspended.

The wound was dressed every two or three days, and healed kindly. The temperature reached 101° on only one occasion.

*March 28.*—Dressings removed. The patient can move around with the aid of crutch and cane.

*April 10.*—He can bear considerable weight on the foot.

*20th.*—He is able to walk with a cane, and has done some light work in the ward.

*May 2.*—At his own request the patient was discharged from the hospital, cured.

This supra-malleolar osteotomy is not any more or any less dangerous than osteotomy in any other location, and it is in the power of the operating surgeon to reduce the danger to a trifling minimum, by means of strict antisepsis.

As regards the method of operating we shall make the following remarks, based upon careful observations upon the cadaver, made by me prior to the performance of my first operation:

It is essential not to open the ankle-joint, that is, to have no communication whatever from the cut osseous surfaces, or even from the incision through the soft parts to the joint, for the following reasons: First, suppuration may take place when there is an osteitis in the bones operated upon, in spite of all antiseptic precautions; and, second, thorough drainage of the ankle-joint is so difficult that suppuration in this location cannot be combated with as great ease as in the knee-joint.

The operation has been so minutely described in the report of Case I., that recapitulation will be unnecessary. We shall therefore mention certain points only in regard to the operation.

The cutaneous incision we shall recommend to be longitudinal, two and one-half to three inches in length, in the middle of the medial surface of the lower extremity of the tibia (as was done in Dr. Verity's case). The transverse incision through the periosteum should be two inches above the apex of the internal malleolus. The two incisions in the periosteum perpendicular to that last mentioned, should be from three-quarters of an inch to an inch long. Care should be taken not to open the sheaths of the tendons of the tibialis anticus and posticus.

It is needless to state that the size of the base of the wedge of bone to be cut out depends on the degree of the deformity, but from the cases operated upon we think that from ten to fifteen millimetres will include the average width. It is advisable to define the base of the wedge by two transverse cuts through the cortical substance by means of a small saw, so as to avoid unnecessary splintering of the cortical substance by the chisel. In cutting out the wedge, care should be taken at the anterior and posterior cortical surfaces to avoid opening the sheaths of the tendons with the chisel.

It would be impossible to perform this part of the operation with perfect exactness, if we could not, by means of Esmarch's bandage, make the operation bloodless, but with the bandage and a good light this part of the operation can now be done with exactness, the sheaths of the tendons having first been retracted.

A common carpenter's chisel is preferable to the so-called surgical chisel, because the extremity of the latter forms the apex of an isosceles triangle, while the extremity of the former forms the apex of a right-angled triangle. The carpenter's chisel is the only one which permits the cutting out of a wedge of bone of the exact shape and size required.

The point of the wedge will be the cortical substance of the lateral surface of the epiphysis. This need not be divided, but should be simply fractured, as no osseous substance here needs to be removed.

The drilling of the fibula—at a point corresponding to the incision through the tibia, and which we wish to fracture—may be done through so small a cutaneous opening as to permit the passage of the drill only, and not to require drainage.

It requires a moderate degree of force, after the bones have been cut, to restore the foot to its normal position. If there is too much resistance, it is evident that either the chiselling of the tibia or

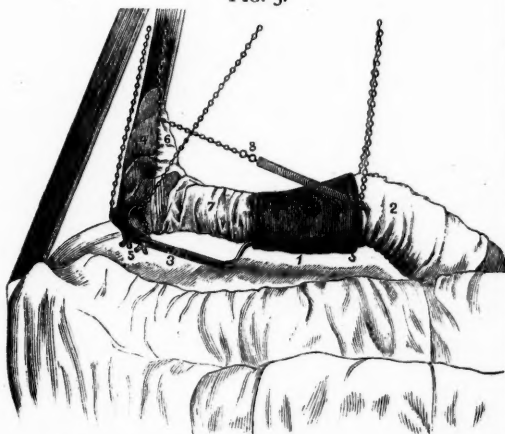


drilling of the fibula has not been sufficiently thorough, and, consequently, must be completed.

It is advisable to unite the cut surfaces of the tibia by a suture of heavy silver wire, because here, as in any other fracture, perfect immobility facilitates osseous union.

The main difficulty in the after-treatment is to keep the parts absolutely immobile, and, at the same time, permit the application of the necessarily voluminous antiseptic dressing. This was accomplished by the apparatus shown in Fig. 3, as devised by Dr. Verity and used in his case.

FIG. 3.



This consists of a broad leather band (1), secured around the upper part of the calf of the leg, outside of a plaster-of-Paris cast (2), extending from the middle of the thigh to the middle of the calf. The plaster cast prevents excess of pressure from tightening the leather band. A steel bar (3) extends down the posterior side of the leg, and has attached to it a movable foot-piece (4), which may be fixed in any desired position by means of screws (5). The foot is attached to the foot-piece by a plaster-of-Paris bandage (6). This apparatus allows, as will be readily seen, ample room for the antiseptic dressing (7), which can be changed without the least movement of the leg, which is suspended from a wooden frame. The adduction of the foot is further secured by a cord (8) from the inner side of the extremity of the foot-piece to the inner side of the leather band.

The cases above mentioned have demonstrated that supra-malleolar osteotomy is a justifiable procedure. First, because it perfectly restores the proper function of the foot, and second, because the inconveniences or dangers subsequent to the properly managed operation do not constitute an insurmountable barrier against the advantages obtainable.

It is to be hoped, however, that the indications for the operation will be more and more rarely met with, as deformity is avoidable by proper management of Pott's fractures. Not less than four cases of this deformity have applied for aid at Cook County Hospital within the last three years. (Dr. Gunn performed the operation in the fourth case.)

It seems natural to conclude that such cases are, as yet, not so very uncommon. If this is the case, the operation may prove to be of some practical value, which will entitle it to a trial by the profession.

#### ANATOMICAL ANOMALIES.

BY WILLIAM T. SMITH, M.D.

DEMONSTRATOR OF, AND ASSISTANT LECTURER ON, ANATOMY AND PHYSIOLOGY IN DARTMOUTH MEDICAL COLLEGE, HANOVER, N. H.

A SUBJECT which came under my notice in the dissecting-room last winter, presented three anomalies worthy of record, one visceral and two muscular. It was the body of a colored man about sixty years of age, who had died apparently from the effects of an incised wound in the right inguinal region.

He had (1.) a horseshoe kidney. The glandular mass measured about six inches transversely, three vertically, and one inch in thickness. Its upper concave border lay across the 4th lumbar vertebra. Its convex border hung over the promontory of the sacrum, and dipped into the pelvis. The larger part of this semilunar body was the right kidney. A fissure indicated the line where the left was united like a small lobe to the inferior lobe of the right. This lobe, representing the left kidney, was undeveloped and had no hilum. A single ureter was found, and that on the right side.

The arteries were five in number, coming from the aorta below the inferior mesenteric and entering different portions of the mass. There were but two veins, both coming from the right end of the mass, and uniting in a common trunk before entering the vena cava. The organ presented externally no appearance of disease.

(2.) The flexor brevis digitorum had three tendons only, inserted into the 2d, 3d, and 4th toes. In place of the 4th was a small distinct muscle arising from the under surface of the tendon of the flexor longus opposite the scaphoid bone. Its tendon was perforated and inserted like the tendons of the flexor brevis. This peculiarity is described in Meckel's Anatomy.

(3.) On removing the integument and fascia from the back of the leg a singular fleshy mass appeared, taking its origin from the lower two inches of the posterior border of the fibula. This proved to be a portion of the accessorius. Its tendon passed over the sheath of the flexor longus pollicis into the arch of the foot, and was there joined by the inner head of the accessorius. The outer head was represented only by an aponeurotic extension.

This variation I do not find described in any anatomy. It was found on both sides.

#### HOSPITAL NOTES.

MONTREAL GENERAL HOSPITAL.

(Service of PROF. RODDICK.)

RAPID LITHOTRITY.

(Reported by RANKIN DAWSON, B.A.)

J. E., admitted December 25, with symptoms of stone, which have, from his account, lasted some years. Six weeks ago he passed a small, irregular fragment, phosphatic in nature. Muco-pus and triple phosphate

crystals in urine. The sound gave evidence of a large, hard stone. It measured  $1\frac{1}{2}$  by 1 inch. On January 12, crushing was performed by Bigelow's method. The lithotrite was introduced seven times, and as many aspirations practised. The stone was composed of oxalate of lime, and the fragments weighed five drachms. For four days after the operation, the urine was bloody and the temperature was over  $100^{\circ}$  Fahr. On the 20th, a fragment which had been left was crushed and removed in three washings. Patient rapidly improved, and was discharged February 3.

## MEDICAL PROGRESS.

**ANEURISM OF THE ORBIT.**—Dr. J. R. WOLFE reports the following case, occurring in a woman aged twenty-two, the mother of two children, of fair complexion, with blue irides, a large nœvus of a claret color on the right temple, and another on the left breast; she received a blow on the left eye in February, 1881, when it became blue and the cheek swollen, but there was no pain. Three months later she began to suffer pain, with severe knocking in the head, which was very violent at intervals. She then consulted me, and I found a general dilatation of the orbital tissues and a slight protrusion of the eyeball. There was no pulsation, but a slight bruit was audible in the orbit. Vision was not affected, and there was only hyperæmia of the retina, without change in the vessels. On account of her expected confinement, she did not return till the 11th of October. The eye then protruded considerably; all the tissues of the orbit were highly vascular; the lids (especially the upper) were infiltrated and dilated. The conjunctiva was injected, and the subconjunctival tissue permeated with coarse, dusky vessels. The eyeball was pressed downwards and outwards, so that aduction beyond the centre was impossible. A tumor half the size of a walnut was seen near the inner canthus. It was soft and pulsating, and effaceable on pressure; when the finger was applied to the inner angle there was a distinct bruit like that of a telegraph wire, and the stethoscope at the orbit conveyed a puffing like that of a steam-engine. The pulsation was visible at some distance, and her husband said that, when he approached her, he heard from the eye a noise like "the clucking of a hen." When the carotid artery of the same side was compressed, the bruit ceased and the tumor was partially effaced.

Vision had become impaired; within the last few days, ulceration of the outer margin of the cornea had commenced, and the pupil was sluggish. As she could not read, or keep her eye open, even for a few seconds, telling the time on a white-dialed watch was the only test for vision I could apply; this she could only do with difficulty.

Wishing to give the antiseptic treatment a trial in this case, I allowed Dr. Foulis, on October 20, to perform the operation. The patient was put under chloroform by my assistant, Mr. Bell, an incision two inches and a half in length was made along the border of the sterno-mastoid muscle, and the artery exposed and tied with catgut ligature under the spray. The ligature was cut short. The only peculiar feature of this case was that a triangular-shaped lymphatic gland of considerable size was found over the vessel, and this had to be lifted to allow the application of the ligature. The edges of the wound were brought together by wires and the antiseptic dressings applied. The spray was also used in the subsequent dressings. Pulsation in the orbit immediately ceased, the tumor was considerably diminished, and the eyeball retracted within the orbit to such an extent that motion in every direction was perfect. The ulceration of the cornea was arrested,

and the conjunctival vessels retreated to the cul-de-sac. Vision is now normal (she can see the seconds' pointer on the watch), the ophthalmoscopic appearance shows clear definition of the disc, and the arteries are of nearly normal calibre. The veins are still slightly dilated and tortuous at the periphery. There has been no bad symptom during the whole course of treatment. She slept well, her appetite was good, and the temperature never rose above  $100^{\circ}$  Fahr.—*Lancet*, Dec. 3, 1881.

**NEW METHOD FOR RELIEVING THE PAIN OF LEAD COLIC.**—Dr. GENEUIL relates a case of lead colic to which he was called in the country, and where none of the various means adopted for the relief of the terrible pains of lead colic, as rubefaction by sinapisms, chloroform, electricity, and hypodermic injections of morphia were at hand, and in which he succeeded in giving complete and permanent relief by a very simple procedure. Having directed a napkin to be heated at the fire, he first applied a towel wetted with almost ice-cold water to the whole surface of the abdomen, while the patient was shrieking with pain, and having retained it there for four or five seconds, rapidly replaced it by the almost burning napkin. The effect was like enchantment, the pain instantly disappeared and sleep followed, without any return of suffering. The cause of the colic was obscure, but Dr. Geneuil advances the remarkable supposition that the patient, who was an inveterate smoker, had very often in the day to relight his pipe, which he did by means of matches colored with chromate of lead.—*Bull. Gén. de Ther.*, Feb. 15, 1882.

**REMOVAL OF THE UTERUS IN OVARIOTOMY.**—In the *New York Medical Journal and Obstetrical Review*, for March, 1882, Dr. ANDREW F. CURRIER, House Surgeon to the Woman's Hospital, relates a case of removal of the uterus in connection with a multilocular ovarian cystoma, performed by Dr. T. Gaillard Thomas, and remarks that to remove a simple, free ovarian cyst is not a difficult operation, but that such tumors are not to be looked for in the majority of cases. From the record of more than fifty laparotomies performed at the Woman's Hospital, during twelve working months, he finds only nine done for ovarian tumors unattached to surrounding viscera. In several of these, other serious complications were present. The adhesions in the remaining cases were more or less firm, involving the necessary risks of hæmorrhage, septicæmia, and peritonitis. Three out of the entire number held such intimate organic relations to the uterus as to call for the removal of that viscus. In one other case the uterus was removed on account of a growth developed from it. In others the portion of sac attached to the uterus was left. The ovariologist should be prepared to take the bold step of removing the uterus, when it is called for by such complications.

**TREATMENT OF SKIN DISEASES.**—At the meeting of the Harveian Society, of London, on February 16th, Dr. THIN read a paper on the "Treatment of Diseases of the Skin," illustrating his views by remarks on the treatment of eczema, which he showed was most successful when conducted in accordance with the ordinary principles by which acute and chronic inflammations of other parts are treated. In acute eczema the principle of rest to the inflamed part is secured by the free application of absorbent powders. By this means the inflamed rete mucosum is protected until the inflammation terminates by resolution. In subacute and chronic eczema the diseased condition is kept up by a new substance which is formed amongst the products of inflammation, and the rational plan of treatment is to destroy this unknown *tertium quid*. When the symptoms are urgent in this stage, good results are obtained by using

the benzoated zinc ointment of Wilson, the diachylon ointment of Hebra, and the starch poultices of Hardy. These methods of treatment protect the inflamed epidermis, and allow the *medicatrix natura* to come into play, and resolution may thus still be obtained. But frequently these means fail, and it becomes necessary to apply escharotics to the rete, the purely escharotic effect being modified by dilution. The substances generally used for this purpose are ointments containing the salts or oxides of mercury or potash soap. Their action is twofold—they destroy chemically the diseased epithelial cells amongst which the *materies morbi* presumably exists, and they stimulate by the influence they exert on the subjacent blood-vessels an effusion of the blood plasma, in which the elements of a healthy reparative action are to be found. The treatment of the more inveterate forms of chronic eczema which was most successful, was strictly in accordance with ordinary surgical principles, and consisted in eradicating the morbid product by concentrated solutions of caustic potash. Although the necessary degree of stimulation in chronic eczema might be attained by the use of any one of many irritants, in certain kinds of disease one irritant succeeded better than another. The author instanced the two methods of treating eczema of the scalp, by alcoholic solution of potash soap with douches and by diluted mercurial ointments, and gave the preference to the latter, which in his hands had usually led to a more speedy cure. In certain painful forms of moist eczema, he had found the use of the starch poultices of the French school exceedingly useful. In eczema of the scrotum, when the inflammation was severe, he was in the habit of ordering arrowroot poultices, frequently renewed, with great comfort to the patient.—*Lancet*, March 18, 1882.

**CONJUNCTIVAL TRANSPLANTATION.**—DR. MARC DUFOUR terminates an interesting memoir on this subject with the following conclusions:—

1. The human conjunctiva can be replaced by that of animals, by another human conjunctiva, or by another mucous membrane, as for example, that of the mouth.
2. The wound should be made about a quarter of an hour before transplantation, and to be successful there should be no hæmorrhage.
3. It is important that the sutures should be placed in position before the fragment is removed.
4. The tendency of the fragment to shrink is of no practical importance.
5. It is advantageous to bathe the wound and the fragment in a solution of salicylic acid.—*L'Abeille Méd.*, March 13, 1882.

**THE PHYSIOGNOMY OF PHTHISIS.**—MR. FRANCIS GALTON has recently, in conjunction with Dr. Mahomed, been engaged in applying his method of "composite portraiture" to the investigation of the amount of truth which may underlie the popular belief that a certain type of features indicates a tendency to certain diseases or classes of disease. As yet their attention has been limited to the determination of the reality of a consumptive type, and for this purpose they have photographed a large number of patients, whom they then proceeded to group on clinical data. Cases of advanced disease showed nothing particular beyond well-marked emaciation. Cases grouped according to the rapidity of the course of the disease gave negative results, nor had those in whom the hereditary tendency was strongest anything very definite in common. But on a further examination these last were found to fall into two main divisions, not, however, separated by any well-marked line of demarcation. In the first division the faces were broad, with coarse, blunt, and thickened features;

while in the second the faces were thin, narrow, and ovoid, with thin, soft, and narrow features—the two types corresponding with what are commonly known as the strumous and tubercular physiognomies. Comparing, however, phthisical and non-phthisical patients, they found the same proportion of narrow, ovoid faces to exist in each. Thus far their conclusions are opposed to the belief that any single type of face prevails among "consumptive" persons generally, or that persons of any special type are more predisposed to phthisis, although the phthisical members of each class are generally of a more delicate type, with finer features, lighter lower jaws, and narrower faces. Yet the delicate features and ovoid face seem to betray an excessively developed nervous temperament, with a deficiency of bone and muscle and staying power, easily broken down under insanitary conditions or mental strain which their robust brethren would resist; and if, as many maintain, the so-called strumous diathesis be a modified syphilitic taint, it is not surprising that among such the low inflammatory changes called struma should be frequently observed. The inquiry, or rather the method employed, is new, and is certainly very interesting.—*Med. Times and Gaz.*, March 18, 1882.

**MYXEDEMA IMPROVING UNDER TREATMENT.**—At the meeting of the Clinical Society of London held March 10, 1882, Dr. MAHOMED showed a case occurring in a married woman, aged thirty. Her family history was good. She had been married twelve years, and had had seven children, the youngest child eight months old. The symptoms of her disease commenced towards the end of her first pregnancy. She had the usual symptoms of the disease, and her appearance was very characteristic. When first seen, there was great swelling of the lower eyelids, which hung like bags containing fluid; her face was generally swollen, the lips were bluish, the cheeks pink; the hands were hard, swollen, brawny, and stiff—so that her movements were awkward, and her sensation impaired. There was no pitting on pressure of the affected parts, the lower extremities were not affected. Speech was slow and laborious, as usual in this disease. Her chief complaint was pain at the top of the head, worse towards evening and at night. The urine was not albuminous; the impulse of the heart was not perceptible; the pulse small, with the artery apparently contracted, so that at first no satisfactory tracing could be obtained. During the first fortnight, no change in her symptoms was perceptible; after that she was treated by one-fiftieth of a drop of nitro-glycerine, and from this time she rapidly improved. The headache immediately disappeared. In a fortnight the appearance of extreme swelling below the eyes had very greatly diminished; her hands were supple, much softer, her gloves being too large for her; she talked more quickly. The treatment had been assisted during the last week by severe purging. A trace of albumen was found in her urine on two occasions. Her pulse-tracing, when her arteries had been dilated by nitro-glycerine, showed an increase of pressure and prolongation of systole. The improvement in her condition had been frequently remarked upon by her friends and all who had seen her at the hospital. She had now been under treatment about two months, and the skin of her hands was quite loose, and almost natural. Her face, though much improved, was still characteristic of the disease. A photograph taken on February 20 was exhibited. Dr. Mahomed treated her with nitro-glycerine with the intention of relaxing her arteries, thus reducing, to some extent, the arterial pressure, and increasing the rapidity of her capillary circulation. Severe purgatives, which, she said, afforded her great relief, were administered with the same object.—Dr. Cavafy said that these cases



often improved under the most various treatment. In one of his cases the patient, when seen, was unable to take off her wedding-ring, but afterwards this could easily be done. His second case also improved, especially as regarded the hands. A third case, in a gentleman he had seen, had also improved; and in one on whom Charcot had lectured, the Professor regretted that the patient was so much better that he could not show the marks he desired. In one of Charcot's cases, residence in a warm climate, and a modified milk diet, together with sulphur-baths, seemed to do most good. In his own cases he had given one ergot, the other strychnine, and the third was treated by iodide of potassium. But all such cases varied; especially they were worse in cold weather.—*British Medical Journal*, March 25, 1882.

**DIABETIC ENDOCARDITIS.**—M. LECORCHÉ has observed diabetic endocarditis more often in the female than in the male. It only occurs in an advanced stage of the disease, two or more years after its onset, and is localized at the mitral orifice; it can be recognized by a murmur occurring with the first sound of the heart heard at the apex, and by irregularity and intermittence of the pulse. It is usually accompanied by atheromatous degeneration of the arteries, and precipitates the fatal result either by more or less general œdema or by an induced acute hepatitis. It appears to be due to the irritation produced in the endocardium by prolonged contact with blood altered in character by the presence of an excess of sugar.—*Revue Scientifique*, March 18, 1882.

**A MODIFICATION OF THE METHOD FOR TOTAL EXTERPATION OF THE UTERUS THROUGH THE VAGINA.**—Prof. MULLER recommends, on theoretical grounds, the division of the uterus into two symmetrical halves by a vertical incision. Then each half of the uterus, with its ligament, may easily be drawn down separately, and the ligaments may be readily excised and the vessels ligated without risk of hæmorrhage.—*Deutsche Med. Woch.*, March 25, 1882.

**SPAYING FOR UTERINE FIBROIDS.**—Dr. W. WIEDOW, Assistant in the Gynecological Clinic at Freiburg, has published in the *Centralblatt für Gynäkologie* (Nr. 6, 1882) his experience of the above method of treatment. He prefaces his account with some very just remarks, pointing out the tendency that there is, when a new mode of treatment is introduced and is found beneficial, to reason with undue confidence from the first few successful cases, to regard the new measure as one of universal efficacy, and to apply it accordingly. From indiscriminate application bad results follow, and the treatment becomes discredited. Nevertheless, if all results are fully and fairly published, such indiscriminate, and therefore unsatisfactory, practice becomes of great value in enabling us to determine with precision the cases in which the treatment is of real utility. Dr. Wiedow's cases are twenty-one in number, of which three died (a mortality of fourteen per cent.), all of them from peritonitis. In six, ill results of other kinds followed; twice intra-peritoneal abscess; slight peritonitis in two cases; in one peri-vaginal abscess; and in another thrombosis of the saphena vein. As to menstruation, this function was arrested in eleven cases. In four hæmorrhage recurred at monthly intervals from one to three times after the operation, and then ceased. In one, aged forty-four, the patient menstruated for nine months after the operation, and then ceased to do so. In another, hæmorrhage ceased for the three months following the operation, and then recurred, being accompanied with dilatation of the cervix and pains indicating a tendency to spontaneous extrusion of the tumor; the case was successfully ended by surgical enucleation of the

growth. In the remaining case, hæmorrhage was absent for five months and then returned, together with renewed growth and lymphangiectatic degeneration of the tumor. The tumor was punctured and then incised, with a fatal termination. We have then, in short, three deaths and six cases of illness following the operation to put against fifteen cures.—*Med. Times and Gas.*, March 25, 1882.

**APPLICATION OF BLISTERS TO CHILDREN.**—Dr. ARCHAMBAULT, in a lecture reported by M. Paul Lucas-Championnière, in the *Jour. de Méd. et de Chir. Pratique*, remarks that the utility of blisters for children is often doubtful. Even when it is thought necessary to have recourse to this violent means, their application should be carefully superintended; and, if too prolonged, they may bring on a true burn of the third degree and nervous symptoms, notably convulsions, such as have been noted by Graves and others. For a child a year old, it is sufficient to leave the blister on during one or two hours at most. For a child four or five years old, an application for about four hours is always sufficient. If, when the blistering plaster is removed, no vesicle be formed, it suffices to apply an emollient poultice to produce one speedily. Finally, to prevent the accidents which may supervene with respect to the vesicles, care must be taken, according to Bretonneau's practice, to interpose a layer of oiled silk between the plaster and the skin, both in children and in adults. There are a certain number of contra-indications to the application of blisters. Emaciated children, reduced to a cachectic condition by longstanding suppuration, or predisposed to cutaneous eruption, should not, except under special circumstances, be submitted to blistering. On the one hand, it exhausts their remaining stock of strength; and, on the other, the local irritation set up by the blister may serve as a starting-point for an outbreak of eczema or impetigo. It is especially, however, in diphtheria that the use of blisters should be avoided. M. Archambault says that it cannot be too often repeated, that blisters should never be applied to diphtheritic patients, nor even to those suffering from attacks of which the diphtheritic nature is not absolutely demonstrated. This applies especially to false droup, in which blistering is not of the least utility. In fact, under these circumstances, the blister too frequently ulcerates, and becomes covered with diphtheritic products, which increase the gravity of the disease. Finally, in the eruptive fevers, especially measles, which predispose to gangrenous accidents, the use of blisters is contra-indicated. Blisters applied to the nape of the neck, with the intention of soothing insomnia, delirium, and restlessness, not only do not produce the effect required, but increase the evil. It will also be advisable not to have them applied on parts exposed to friction; they should be applied, by preference, on the anterior and lateral portions of the thorax. The wounds consequent on blisters may become inflamed, and then the denuded surface should be covered with emollient poultices. If there be ulceration, the following lotion may be used advantageously: Decoction of cinchona, 500 grammes; solution of chloride of lime, 200 grammes; The diseased surface is afterwards powdered with quinine powder. The following ointment may also be useful in similar circumstances: Glycerole of starch, 30 grammes; red precipitate, 50 centigrammes. When the blister becomes coated with a grayish pellicle, somewhat of the appearance of hospital gangrene, an excellent plan is to cover the injured surface with a coat of plaster-of-Paris. It should not be forgotten that all these accidents are generally subordinate to a bad general condition, which must, therefore, be improved.—*London Med. Record*, March 15, 1882.

**URICÆMIA.**—Dr. BOUCHERON has communicated a paper to the Académie des Sciences (*Gaz. Hebd. de Méd. et de Chir.*, September 2, 1881) on the presence of uric acid in the blood, which he asserts to be a very frequent condition, and the cause of a very large number of diseases. For its detection, he recommends the examination of the saliva. One or two grammes of saliva should be dried in a capsule without boiling or so much heat as to turn it yellow, and when it is dry, a rod dipped in nitric acid should be passed lightly over the deposit, and followed immediately by a rod dipped in ammonia. He thinks this murexide test more delicate and less liable to fallacy than the method of crystallization.—*London Med. Rec.*, March 15, 1882.

**CURE OF PNEUMOTHORAX.**—The cases of pneumothorax related at the last meeting of the Clinical Society by Dr. G. Johnson and others are of considerable interest from several points of view, both pathological and clinical. But the most striking fact to be elicited from the discussion is that a lung may completely recover after having been compressed against the spine for several days, and even longer. This is in direct opposition to the view currently taught, that the lung is maintained in its expanded condition by the atmospheric pressure on its inner surface, and that if this be neutralized by the same pressure on its outer surface, the lung at once collapses on account of its great elasticity. But such cases as Dr. Johnson's demonstrate that this view is not correct, and show that a collapsed lung may afterwards completely expand. This makes the prognosis of such cases far more hopeful, and justifies active therapeutic means, such as tapping, for it holds out the prospect of being able to extract all the air from the pleural cavity, and at once allow the expansion of the lung. The most important bearing of these facts, however, is upon the treatment and results of cases of pleuritic effusion. They suggest inquiry as to the reason why a lung does not fully expand after compression by fluid as it does after compression by air. Evidently, the physical results of the pressure are the same in the two cases, and there is the same natural tendency to lung expansion in the one case as in the other. What, then, is the hindrance? The explanation is to be found in the fact that in cases of fluid effusion there is inflammatory thickening of the pulmonary pleura; and if the lung is compressed for any length of time the inflammatory tissue organizes into fibrous bands, binding the lung down to the spine, and preventing the subsequent complete expansion of the lung. If this is correct, physicians have a strong additional inducement to submit cases of pleurisy to surgical treatment quite early, before these adhesions have formed. For it cannot be too strongly insisted upon that the mere absorption or removal of the fluid does not constitute the cure of pleurisy; that is only accomplished when, in addition, the compressed lung has expanded to its former size. There is now clear evidence that such results are theoretically attainable if only active measures be adopted at a sufficiently early period in the disease. At any rate, it is to be hoped and expected that more correct views of the physiology of respiration will quickly be followed by improved results in treatment.—*Lancet*, March 4, 1882.

**PILOCARPINE IN SEROUS PLEURISY.**—M. A. CORIVAUD draws the following conclusions from the observation of the three cases of serous pleurisy treated by hypodermic injections of pilocarpine.

1. Nitrate of pilocarpine injected under the skin in doses of from 1 centigramme to 25 milligrammes produces no local disturbance, and is more than a mere sialagogue.

2. When employed at the outset of pleurisy, this drug is capable of so modifying the inflammation of the pleura as to prevent the formation of effusion and of false membrane, and to accelerate the absorption of the secretion already formed.

3. It appears to act by the power which it possesses of causing the abstraction of water, and is therefore analogous in its action to purgatives and diuretics.

4. Pilocarpine is to be preferred to the drug from which it is derived.—*Journ. de Méd. de Paris*, March 18, 1882.

**THE INFLUENCE OF POSTURE ON THE PULSE.**—The influence of posture on the frequency of the heart's action, pointed out as long ago as 1732, by BRYAN ROBERTSON, has never been satisfactorily explained. It has been ascribed to the difference in the state of the muscles in the upright and recumbent posture, but most authorities are inclined to accept the explanation which has been given by Marey, that the retardation of the pulse in the recumbent posture is the result of a general increase in the blood-pressure, due to the difficulty the heart has in emptying itself in that position. The latest writer on the subject, Schapiro, of St. Petersburg, also comes to the conclusion that the result must be ascribed to an alteration in the pressure within the heart and vessels. He found that the blood-pressure within the radial artery is demonstrably higher in the horizontal than in the vertical position, and then examined the effect on the pulse-frequency of alterations of posture when the femoral artery is compressed just above Poupart's ligament. From his observations he concludes that the difference in the frequency of the pulse in healthy men between the horizontal and vertical posture may amount to from one to thirty beats per minute. In the horizontal posture the pressure within the heart and arteries is two to three millimetres higher than in the upright position. In the recumbent posture compression of the femoral artery, which increases the arterial pressure, lessens the pulse-frequency. In heart disease, so long as the lesion is compensated, posture has the same effect on the pulse as in health. If, however, compensation is imperfect, the horizontal posture does not lessen the frequency of the pulse, and may even increase it. Schapiro thus differs from Graves, who was inclined to regard the absence of the normal effect as an indication of cardiac hypertrophy. In some general diseases, also, as typhus, the pulse-frequency is not lessened either by the horizontal posture or by compression of the femoral artery.—*Lancet*, March 25, 1882.

**MERCURY AND OTHER REMEDIES IN THE TREATMENT OF SYPHILIS.**—In the *New York Medical Journal and Obstetrical Review* for March, 1882, Dr. GEORGE HENRY FOX, Clinical Professor of Diseases of the Skin in the College of Physicians and Surgeons, New York, maintains that mercury, while undoubtedly our most valuable remedy in the medicinal treatment of syphilis, is yet an over-rated drug, and is not essential to the cure of the disease. It is best administered internally rather than by inunction, by vapor baths, or by hypodermic injection. The amount usually given is unnecessarily large, and its local irritant effects should be avoided. The duration of its use should vary according to the severity of the case: no absolute rule can be laid down. Iodide of potassium, the author thinks, should not be reserved solely for the late period of the disease, for their is no stage in which either iodine or mercury is incapable of doing good. Instead of the so-called "mixed treatment," he prefers to give the two agents separately. Iodide of potassium ought not to be administered continuously for any great length of time. It does its work quickly or not at all, and when

unnecessarily continued is sure to do harm. Very large doses should not be used without the very plainest indications. They are not without their value in certain cases, but iodism has doubtless often been mistaken for the manifestations of syphilis. Iron deserves to be ranked with mercury and iodide of potassium, from its effect on the anæmia that invariably accompanies the early stage of syphilis. Cod-liver oil is another remedy of great value, especially where there is a strumous taint.

**A NEW TEST FOR MORPHIA.**—JORRISON (*Zeitschr. für Analyt. Chem.*, Band xx. p. 422) proposes a new and delicate test for morphia. A solution of the alkaloid, free from foreign materials, is evaporated to dryness, and the residue is heated in the water-bath with sulphuric acid. A minute crystal of ferrous sulphate is added, and stirred with a glass rod. The mixture is heated for a minute longer, and poured into a white capsule, containing about half a fluidrachm of strong solution of ammonia. The morphia solution sinks to the bottom, and a red color—violet at the margin—forms where the two liquids touch, whilst the ammoniacal liquid becomes blue. Codeia does not give this reaction, which succeeds with one-tenth of a grain of morphia.—*London Med. Record*, March 15, 1882.

**PUNCTURE OF THE PERICARDIUM.**—At the meeting of the Société Médicale des Hopitaux, held February 24, M. RENDU showed a patient on whom he had performed paracentesis of the pericardium. The patient was a young man, and had been admitted into the Tenon Hospital in a typhoid condition with signs of a dry pericarditis, an effusion afterwards taking place, and increasing day by day. M. Rendu alluded to a diagnostic sign which he had never seen alluded to, and which was very marked in his patient, and led him to diagnose an abundant effusion, that is, the existence of a very pronounced murmur (*bruit skodique*) posteriorly in the infra-spinous fossa, with preservation of the resonance of the lower part of the chest. M. Rendu decided to perform paracentesis. He believed, however, that the point of puncture usually chosen, in the fourth intercostal space about three centimetres to the left of the sternal border, was unfavorable, since one was liable, by inclining inwardly, to puncture the internal mammary artery, or, by inclining outwardly, to wound the heart, which is usually dilated. M. Rendu, therefore, selected a point in the sixth intercostal space, a little below where the apex beat is felt, and eight centimetres from a vertical line passing through the centre of the sternum. Nine hundred and fifty centilitres of effusion were drawn off; the operation was entirely successful, although a little pulmonary congestion accompanied by fever, led him, for a time, to fear some serious complication. Examination three weeks afterwards revealed pericardial friction sounds, showing, therefore, that the secretion had not been reproduced. The beats of the heart were imperceptible, and the pulse weak. One month after the operation the patient had an attack of pleurisy on the left side, from cold, from which he soon recovered.—*Le Progrès Méd.*, March 18, 1882.

**RELATIVE POWER OF ANTISEPTICS.**—The *Revue Scientifique* for February 4 contains an abstract of experiments made by M. JALAN DE LA CROIX to ascertain the relative value of various substances in preventing the development or evolution of the microbia of putrefaction. He placed finely divided boiled or raw meat in water, and ascertained the maximum and minimum quantities of each substance that were effective. The figures in the following table indicate the number of

grammes of water in which one gramme of the substance mentioned prevents the development of microbia:

Substance employed.	Maximum dose in which development is not arrested.	Minimum dose in which development is arrested.
Alcohol, . . . . .	30	1.77
Chloroform, . . . . .	134	1
Soda biborate, . . . . .	107	14
Eucalyptol, . . . . .	308	14
Phenol, . . . . .	1002	10
Thymol, . . . . .	2229	20
Potash permanganate, . . . . .	3041	35
Picric acid, . . . . .	3041	100
Borated soda salicylate, . . . . .	3377	30
Benzoic acid, . . . . .	4020	50
Ethereal oil of mustard, . . . . .	5734	40
Sulphurous acid, . . . . .	7534	72
Alum acetate, . . . . .	7535	478
Salicylic acid, . . . . .	7677	343
Mercury bichloride, . . . . .	8358	2525
Lime hypochlorite, . . . . .	13092	109
Sulphuric acid, . . . . .	16782	135
Iodine, . . . . .	20020	410
Bromine, . . . . .	20875	493
Chlorine, . . . . .	34509	431

From which it will be seen that chlorine, the hypochlorites, and perchloride of mercury are very effective, whilst alcohol is comparatively impotent.—*Lancet*, March 4, 1882.

**TREATMENT OF SUPPURATING BUBOES.**—Dr. O. PETERSON discusses the various methods of treating buboes (*St. Petersb. Med. Woch.*, No. 52, 1881), and describes the plan now adopted by himself. He recommends that every inflamed bubo should be painted with iodoform-collodion and covered with a warm compress; and this, he states, is often successful in dispersing the swelling. If, however, suppuration take place, an incision is made, and the abscess-cavity scraped out with the sharp spoon, after which it is washed out with a twenty per cent. solution of carbolic acid. The wound is then covered with several layers of salicylic wool, and over this a firm pad of tow covered with varnished paper. A bandage is then firmly and evenly applied, paste being also sometimes used to give greater firmness, so that the abscess-walls are kept in close and accurate apposition. In twenty cases treated by the author in this way, cure was usually obtained after one to three dressings, each being left undisturbed ten to fifteen days on an average. In one case, when the pressure had not been quite equable, a second small abscess had to be opened.—*London Med. Record*, March 15, 1882.

**NEPHRECTOMY BY ABDOMINAL SECTION.**—MR. KNOWSLEY THORNTON removed the right kidney from a young woman at the Samaritan Hospital on March 11th. The case was one of pyonephrosis, and the kidney was incised and drained through the loin for a month before its complete removal was decided upon. The kidney was removed by abdominal section, the incision being made outside the rectus abdominis, as recommended by Langenbuch, of Berlin, in the discussion on Nephrectomy at the Congress. Mr. Thornton found great advantages from this incision, as compared with either the ordinary median incision or the lumbar section. The patient was progressing very satisfactorily four days after the operation, there having been less fever and constitutional disturbance than there often is after an ordinary ovariectomy. The patient from whom Mr. Thornton removed an extra-uterine foetation by abdominal section at the Samaritan Hospital a fortnight ago is quite convalescent.—*Med. Times and Gas.*, March 18, 1882.



# THE MEDICAL NEWS.

A WEEKLY JOURNAL  
OF MEDICAL SCIENCE.

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SATURDAY, APRIL 22, 1882.

## THE MOVEMENTS AND ELECTRIC IRRITABILITY OF THE HUMAN HEART.

In a few rare instances nature has permitted the verification on man of the results derived from experiments on the lower animals. For some time past, in Germany, a case has been the subject of study, which, for the importance of the results obtained, promises to rival the famous Alexis St. Martin. In 1878, Catharina Serafina, a Silesian peasant, forty-two years old, submitted to an operation for the removal of an enchondroma of the chest-wall, in which it was necessary to remove the greater part of the anterior portion of the third, fourth, fifth, and sixth ribs of the left side. In spite of the pneumothorax and collapse of the lung which followed, she nevertheless recovered, and served in 1879 as a subject of study on the motions of the heart for Grützner, and later for Filehne and Penzoldt in their investigations on the mode of production of the apex beat. Their results attracted very little attention from the unsuitableness of the subject for researches as to these points.

In the autumn of 1880, Serafina came under the care of Professor V. Ziemssen, in Munich, who has been since then pursuing a number of important studies on the movements of the heart as well as on its irritability, and that of the phrenic nerve. These results have been recently published, and deserve attention not only from the confirmation they furnish of the results obtained by experiment on frogs and the lower mammals, but also because they open up an entirely new field of therapeutics.

Ziemssen gives two illustrations of the condition of the woman's chest when experimented on: a

large hole is seen in the left breast, which is said to be 9 cm. broad, and 11 cm. long, bounded on the edges by the ends of the excised ribs. The opening thus exposed is about the size of a man's fist, and is 9 cm. deep; the skin covers the interior of the cavity and the organs bounding it, viz., the right and left ventricle, left auricle, pulmonary artery, left half of the diaphragm, and the portion of the lung which, though still containing air, and capable, to a slight degree, of carrying on respiration, lies compressed against the vertebral column; the nipple lies at the bottom of this cavity.

Naturally this great disturbance of the normal anatomical relations of the heart, renders observations on the mode of production of the apex beat of little value, though Ziemssen was able to confirm Filehne and Penzoldt's conclusions, that at each systole of the ventricle there occurred a movement of the apex towards the right without any downward motion.

The case was, however, admirably suited for cardiographic studies of the separate phases of contraction of the heart chambers and pulmonary artery. It was found, as would be expected, that the left ventricle contracts with greater force than the right, with a gradual increase of energy towards the apex, while the break in the descending limb of the tracing, due, as was previously pointed out by Landois, to the closure of the semilunar valves, was more marked at the base than towards the apex. Also in the ascending limb of the tracing of the ventricular contraction, breaks are to be seen, which Ziemssen, in accordance with Marey, attributes to the transmitted contraction of the auricle. A remarkable fact disclosed by tracings taken from the left auricular appendage, was that the auricular contraction lasts during the greater part of the systole of the ventricle, attaining its maximum only a little before that of the ventricle, thus being antagonistic to the ordinary views which attribute only *one-third* of the time of the ventricular contraction to that of the auricle, while it is supposed that the latter is completed before the former commences; this may be seen in the tracings obtained by Marey from the auricle of the horse, though it is to be noted that similar tracings obtained by Francois-Franck from the heart of a woman with ectopia cordis, resembled more closely that of Ziemssen, though Francois-Franck also found that the height of auricular contraction coincided with the commencement of ventricular systole.

It was also found that light pressure with the finger on the auriculo-ventricular groove caused a reduplication of the systole of both ventricles and pulmonary artery; with a heavier pressure, a typical delirium cordis was produced, in which all regularity of rhythm is lost, while pressure on the pulmonary

artery caused great irregularity in the contractions of the right ventricle, sometimes retarding, sometimes accelerating it. The effects of increased arterial resistance, obtained by simultaneous compression of both femoral and subclavian arteries, were generally a slowing of the pulse and increase of energy of the contractions, but the results are somewhat invalidated by the pain and general disturbance produced by the necessary manipulations.

The path of the left phrenic nerve was easily traced over the right ventricle, a little in front of the left coronary artery, and when irritated with a weak faradic current, caused a contraction of the diaphragm and a consequent depression of the floor of the cavity, while no pain whatever was felt in the operation, thus overthrowing the hypothesis of Luschka, who attributed the pain in the shoulder in hepatic and peritoneal inflammation to implication of sensitive branches of this nerve, distributed to the pleura, peritoneum, and pericardium. The phrenic was also seen to react, like other motor and mixed nerves, to the galvanic current.

Ziemssen's most valuable results, however, relate to the effects of electric irritation applied to the heart itself. He found that while the induced current was incapable of producing any modification of the heart rhythm when the strongest currents were passed through the auriculo-ventricular ganglia, the body of the ventricle, or the apex (which experiments, by the way, it was found were absolutely painless), the constant current was found to control with the greatest exactness not only the energy and form of contraction, but also the rhythm and frequency of cardiac pulsation, the same laws being applicable in this case as in the instance of other muscles with undisturbed nerve supply. With sufficiently strong currents, each irritation is followed by a complete and perfect systole of both ventricles. It is thus seen that any desired frequency above the normal rate may be produced by using a corresponding rate of interruption, each ventricular systole, even when produced as rapidly as 140 per minute, being strong enough to cause a perfect and strong pulse of the same rate at the radial artery. When, however, the frequency is excessive, the diastolic relaxation and systolic contraction of the ventricle become incomplete, and the breaks in the ascending and descending limbs of the tracing disappear, so confirming in the main the results obtained by Basch on the frog's heart. These rapid interruptions produced no painful sensations.

When, however, a strong, constant current, without interruptions, is passed through two points on the surface of the ventricles, one being on the left ventricle 2 cm. below the left auriculo-ventricular furrow, behind the vertical branch of the coronary artery, the other on the right ventricle in the neigh-

borhood of the phrenic nerve, the rate of pulsation is doubled or trebled, to return again to the normal rate as soon as the current is broken. It is interesting to notice that these localities correspond very closely with the anatomical data as to the seat of the motor cardiac ganglia.

Ziemssen was also able to confirm on the human heart the law formulated by Kronecker and Bowditch from studies of the frog's heart, *i. e.*, "minimal irritations are at the same time maximal irritations," or, in other words, increasing the strength of the current does not increase the strength of the contraction; while he also found, further confirming Basch, that the frequency of the cardiac contractions could be reduced below the normal rate, for instance, to 50 beats in a minute, by slow interruptions of a very strong current; but the rhythm so produced is quite irregular.

Probably the most important results, certainly as regards their practical application, were obtained in the experiments on the effect of galvanic currents passed through the chest-wall, without any direct contact of the electrodes with the heart itself. It was found, both in the case of Serafina and in individuals with normal anatomical relations, that, by placing one pole on the sternum and the other on the vertebral column at the level of the heart, and passing a strong reversing current, it is possible to produce precisely analogous modifications of rhythm and energy of contraction as indicated above. The therapeutic value of such a means of acting directly and positively on the heart is evident, and we will await with interest the results of the studies in this connection with which Prof. Ziemssen is now engaged.

#### THE LEGAL RESPONSIBILITIES OF THE MEDICAL PROFESSION.

In a recent number of the *British Medical Journal* there is a discussion as to whether a physician who makes a corporal examination of a female patient, without her express consent first obtained, does not render himself liable to an action for damages for an indecent assault. It would seem that the English law on this point is clear and well settled; and a physician making such an examination, even though acting at the request of an officer of the law, is guilty of an offense which forms the basis of an action. It is not necessary that the person examined should make *bodily* resistance; if there be a mere *verbal* protest, unaccompanied by physical resistance, the physician proceeds at his own risk; and the fact that he was instructed to make the examination by a magistrate, police officer, or the like, forms no defence, since a physician, like any one else, is presumed to be aware of the legal consequences of his actions; and in this case the

English courts have held that the command of an officer of the law cannot make that lawful which is unlawful, although such a command may be pleaded in mitigation of damages.

A careful examination of American authorities, of the report and statute books, and of American works on medical jurisprudence and on criminal law, fails to discover any case bearing on the point. One eminent authority on questions of medical jurisprudence, Dr. Edward Hartshorne, the American editor of Taylor's work on the subject, recently informed us that he had no recollection of having seen the matter discussed, much less had he ever read any American cases on the subject. F. A. Bregy, Esq., who has been for many years Assistant Prosecuting Attorney for this County, never met with a case of this sort throughout his entire experience, nor is he aware that the question has ever arisen in this country.

There is one case, however—that of the People *vs.* McCoy (reported in 45 Howard, New York, p. 216)—which, although not exactly in point, may be thought to have an indirect bearing upon the matter. A woman was arrested, charged with infanticide. Naturally, the first question to be decided was, whether or not she had recently been delivered of a child. The Coroner directed two physicians to make an examination, and report upon the facts. The prisoner strenuously objected; but on being told that force would be used if she did not submit, offered no further resistance; and the physicians gave it as their opinion that the woman had given birth to a child within two weeks previous. On the trial, the Court refused to admit this evidence, on the ground that neither the Coroner nor any other officer of the Commonwealth had any *right* to insist upon such an examination being made; that the proceeding was in violation of the spirit and meaning of the clause of the Constitution which declares that "No person shall be compelled, in any criminal proceeding, to be a witness against himself," and this evidence was excluded, the Court refusing to hear argument upon the subject.

Without entering into a discussion of the correctness of this ruling, which, however, seems to us to be erroneous, enough appears to show the judicial disfavor in which examinations of this sort are held; and the positive character of the English decisions, and the absence of American decisions to the contrary, may suggest to the members of the medical profession their liability in such cases. The English rule appears to us to be based on reason and common sense, and there can be little or no doubt that, if the question were to arise in an American court, the same principle would obtain. Plainly, a physician has no moral right to make an examination where the person to be examined objects. In the case of

a private patient, he cannot resort to force or to threats; the most he can do is to point out the consequences which may result from a refusal to submit to an examination, and allow the patient to decide the question, and thus relieve himself of all responsibility in the premises, or withdraw from the case. So, too, when acting under the instructions of an officer of the law, the physician, should he meet with a refusal, may point out the legal presumptions which will arise from such a refusal, but there his power ceases.

Where the ends of justice or the demands of health require an examination in the case of one who is *non compos mentis* or a minor child, the express consent of the natural guardian or guardians, such as parents, brothers, or sisters, or the like, should be first obtained; where such guardians are inaccessible, a case arises where there is need of the most extreme caution.

It is to be hoped that the day is not far distant when a statute will be enacted which shall define as nearly as possible the rights, duties, and liabilities of the members of the medical profession. Cases calling for the exercise of the soundest discretion on the part of physicians are of daily occurrence, and in view of all the circumstances it is remarkable that their actions are not more frequently called into question.

#### THE MEDICAL PROFESSION AND THE NEW YORK CODE OF MEDICAL ETHICS.

THE state of professional opinion on the subject of the new Code of Ethics adopted by a small section of the New York State Medical Society is well exhibited in the excerpts published by us, from week to week. The physicians of the United States are all but unanimous in their opposition to the new doctrine. It becomes more and more evident that the great body of the medical profession in the City and State of New York, not consulted and not recording their opinions, continue, as they have been, opposed to the surrender of professional honor, and that the real leaders are a number of specialists whose interests are promoted by the withdrawal of all restrictions on consultations. In a recent issue of *The Rocky Mountain Medical Times* (April, 1882) we find a letter from a New York correspondent, whose initials are those of a very well-known name in the medical circles of that city, and whose utterances may therefore be regarded as an authoritative exposition of the views of the specialist class. He affirms that "we," of New York, "have long outgrown the old iron-clad code of the American Medical Association, and that if that venerable body of good livers chooses at the next meeting to excommunicate us, we are prepared for the excommunication."



It appears, indeed, that the New York specialists have long refused to be bound by the Code of Ethics. "One evening," says the correspondent above referred to, "a prominent physician, who does a large consulting practice, was discussing this matter of consultation with homeopaths, and in reply to a question whether he would consult with them, replied, 'There are only two classes of men in this city who decline, viz., young men and fools!'" The men who are thus secretly violating their public pledges are doubtless most active in bringing about the *reform* which will enable them to do publicly acts which were before possible only with the greatest secrecy. We are greatly mistaken in the temper of the medical profession if these specialists do not find themselves left to the association and encouragement of the hordes of irregulars whose fees they have so sedulously cultivated.

The developments connected with the birth and promulgation of the new Code render it more than ever certain that the honor of the medical profession, its very existence and organization, indeed, are involved in the maintenance of its cherished principle of non-intercourse with all forms of irregular practice.

#### THE FIRST ANNUAL REPORT OF THE NATIONAL BOARD OF HEALTH.

THIS somewhat bulky volume of over 450 pages, and two score of maps, plans, diagrams, etc., has just been received. It covers the period of origin and organization of the Board, and its operations during the year 1879. It is "somewhat bulky," as we have said, but it is as full of meat as is the proverbial egg.

The report proper covers only 20 pages, and is chiefly formal and financial. The appendices, which constitute the bulk of the volume, are of course the most detailed and valuable part of the work. We can only name a few of their most important topics to show the value of the book: The Havana Yellow Fever Commission, Diseases of the Domestic Animals, Sanitary Surveys of Memphis and of the Ports and Cities on the Eastern and Southern Seaboard, Hygiene of the Mercantile Marine, various questions of quarantine, and some important investigations into the outbreak of Malignant Diphtheria in Northern Vermont.

It is not only a book valuable in itself, but it points with no uncertain indication to the importance—nay, the necessity—for such a National Board of Health. Had nothing else been done by the Board than its work as to Yellow Fever, it would have been a piece of national economy to establish it. The Board is eminently one of those things which "have a right to be."

#### THE EFFECT OF AMPUTATION ON THE PROTECTION AFFORDED BY VACCINATION.

A CORRESPONDENT writes us, calling attention to the following statement by Dr. Billings in his article on the late London International Medical Congress in the *International Review*, for January, 1882, page 7:

"It is possible that the immediate location of the body in which a vaccine vesicle has flourished is so changed by the process that it continues thereafter to affect the constitution of the blood in such a way that the poison of small-pox cannot flourish therein, and this hypothesis accords with the fact that in the case of the loss of the limb upon which the vaccine cicatrix occurred *the susceptibility to unmitigated small-pox has been found to return.*"

The number of cases in which vaccinated persons would lose the scar by amputation, and thereafter would be exposed to small-pox, must be quite small. As it is an experiment which but rarely occurs, it is all the more important to collect every instance. We shall be glad, therefore, if any of our readers who have observed such cases, will favor us with sufficiently full notes of them.

It would also be of interest to know in those cases in which amputation has not occurred, but the scar has been lost by its removal by a surgical operation, as, *e. g.*, in the removal of a tumor, or by accident, whether the same loss of immunity from the disease has occurred.

#### THE GOERSEN CASE.

MOST of our readers will remember the case of Goersen, one of the so-called "doctors" cast out upon the community by Buchanan's "College." He poisoned by arsenic, successively and successfully, first his mother-in-law and then his wife in order that, without either of the aforesaid inconvenient females, he might obtain their estate.

The Court of Oyer and Terminer of Philadelphia, departing from what we believe is the usual legal course, allowed the Commonwealth to show the fact of the antecedent poisoning of the mother-in-law at Goersen's trial for the murder of his wife, on the ground that it was a necessary link in the chain of crime in order that he should obtain the property. This his counsel, in an appeal to the Supreme Court of the State, alleged as a reason for a new trial. To the surprise not only of the community, but also of lawyers, the Supreme Court has reversed the decision of the lower court, and that, too, on a most unexpected point. The admission of the evidence as to the mother-in-law's death was not deemed an error, but the court held that there were certain "general errors," and especially that Judge Biddle's "charge inadequately presented the case in view of the circumstantial character of the evidence and of the

gravity of the crime charged." Had the Judge erred by giving wrong instructions either as to fact or to law, we could understand it, but to reverse the decision because the judge did not say enough as to facts with which the jury were perfectly familiar, apparently opens the door of escape extraordinarily wide. It may be good law. It scarcely seems good sense.

DR. BARCLAY, in delivering his retiring address, as President of the Royal Medical and Chirurgical Society, spoke of the "sparkling novelties which glitter in the sunshine of ephemeral notoriety." It is evident that the late president is a conservative gentleman of the old school, who finds little to praise in these degenerate days. It is related of the elder Mott, that one day driving out with one of his sons, the youngster said, "Father, why do you not drive faster?" "Ah," said the old man, "I am driving out, and you, son, are driving in!" It has always been so. In every age were sparkling novelties; many died by the wayside; a few became living truths, known to all men.

## SPECIAL ARTICLE.

### THE MEDICAL NEWS COMMISSION

ON THE

MANAGEMENT OF VACCINE FARMS AND ON THE PROPAGATION OF BOVINE VIRUS.

(Continued from p. 414.)

THE VACCINE FARMS ABOUT BOSTON—(Continued).

We next called at the office of the "New England Vaccine Company," Chelsea, Massachusetts, and saw Dr. William C. Cutler, who appeared to be in charge of the establishment, and who absolutely refused us admission to the stables and operating-room, and declined to answer any questions concerning his method of propagating virus. As to the professional status of Dr. Cutler, we learn that he is not a member of the Massachusetts Medical Society.

Dr. Cutler is said to be a very large producer of bovine virus. In one of the daily papers of Boston the statement appears—presumably with his sanction—that he is able to charge from 8,000 to 15,000 points from one heifer. This quantity is three or four times larger than that collected by any other propagator.

Dr. Cutler is the patentee and manufacturer of the so-called "patent solid lymph cones," sold by agents throughout the country. In a circular issued to the medical profession by the "New England Vaccine Company," these cones are described as being "consolidated lymph," and as "solid lymph made into a thick mass," and as being "entirely free from any trace of pus, debris, or epidermis." Prof. C. A. Lindsley, M.D., of Yale College, submitted one of these cones for microscopical analysis to Dr. T. Mitchell Prudden, Director of the Physiological and Pathological Laboratory of the College of Phy-

sicians and Surgeons of New York, and Lecturer on Normal Histology in the Medical Department of Yale College, and the following is a copy of his report of the examination:

"The mass consists largely of larger and smaller clusters of epithelial cells and cell detritus, together with a large number of hairs, some broken off and others torn out by the roots. Besides these things, there are fragments of vegetable substances of various kinds, fibres, bits of seeds, etc., shreds of connective tissue fibres, starch granules, and considerable colored amorphous material whose nature I am unable to determine. A few lymph cells and fragments of the same are also present.

"Quantitative results were not sought for, but from about half of the single cone I picked out seventy-four fragments of hair which were readily visible to the naked eye, and many more were left which were readily seen by low powers of the microscope."

One of these patented cones was purchased by us from Henry C. Blair's Sons, Philadelphia, agents for the "New England Vaccine Company," and examined with the following results:

We attempted the determination of the morphological constituents only, without reference to its chemical constitution. Following the directions furnished with the "cone," a small heap of filings from the mass was prepared, and the powder stirred in the little glass cup half full of fresh water. A drop of this mixture, placed upon a slide, covered with thin glass, and examined under a power of 220 diameters, showed a large quantity of amorphous masses and granules, with a few isolated epithelial cells and leucocytes.

In order to approximate to the relative proportions of these ingredients, a row of 20 microscopic fields, across the middle of the cover, were inspected, with the result of finding in them: 8 separate epithelial cells, and several masses which seemed to be partly made up of epithelium; 2 starch corpuscles; 1 fungous spore, and 3 leucocytes; also, a mass apparently made up of 200 or 300 leucocytes (these may have been either lymph, pus, or white blood-corpuscles).

Under a power of 50 diameters, which allowed of rapid searching over the whole film of fluid beneath the cover glass, 5 fragments of cotton, 1 of flax, and 1 of blue wool (perhaps from a coat or undershirt), were detected. No cow's hair existed in the drop of fluid examined on this slide; but, in a subsequent drop, three minute fragments, such as are produced in close shaving, were found.

After tinting with aniline, another drop, examined under a high power ( $\frac{1}{2}$ th immersion, magnifying 1250 diameters), showed very satisfactorily that the "amorphous material" was chiefly made up of leucocytes and epithelium.

For the purpose of comparison, a small quantity of powder, filed off with a new file, from one of the vaccine crusts from another producer (and considered by him worthless) was next mingled with three drops of water and examined under the high

<sup>1</sup> Transactions State Board of Health, Connecticut, 1881.

power. Its solution was effected with much greater difficulty than that of the "cone" filings, but the resulting fluid contained the same amorphous masses of epithelium and leucocytes, except that the latter were in larger proportion.

Hence it appears that microscopic examination of this particular "cone" shows the presence of both pus (or lymph) corpuscles, and epithelial cells; and although these cellular elements would almost certainly occur in fresh lymph, yet candor compels us to admit that we think they would be far less numerous in the pure fluid of the vaccine vesicle.

Besides this, the physical properties of the "cone," such as its cohesiveness, and the ready solubility of part of its substance in cold water, indicate that it is mixed with some foreign matter, such as gum, gelatine, or sugar, and is not, therefore, the unadulterated vaccine lymph which it is alleged to be.

Although the above analysis does not, perhaps, show quite so large a proportion of extraneous material in the composition of the "cone" as that made by Dr. Prudden, yet the fact is amply demonstrated that these "patented cones" are not, as stated by the patentee, purely "*consolidated lymph*," and "*entirely free from any trace of pus, debris, or epidermis*." In comparing the cone with the above-mentioned worthless bovine crust, we found their properties to be substantially the same; the only difference being that the crust was less soluble, and contained, perhaps, a little larger proportion of cellular elements. A writer, commenting on the analysis made by Dr. Prudden, remarks: "Of course, the true process of making these cones is a matter of secrecy with the manufacturer, but the statement of a former employé where they are made, that the vaccine crust, covered with stable debris, is powdered in a mortar, sifted, mixed with an adhesive fluid, and moulded into shape, is substantiated by the analysis."

It was thought desirable not to confine our examinations of the "cones" to a single specimen. Consequently a second cone was procured, and a portion of the dried material was macerated in a mixture of glycerine and water, placed under the microscope, and found to contain: (1.) Numerous small, irregularly round, and oval cells, faintly granular, and resembling lymphoid cells. (2.) Squamous epithelial cells. (3.) Small columnar cells. (4.) Fragments of hair. (5.) Crystals resembling octahedra of oxalate of lime. (6.) Foreign matter of indeterminable nature.

The lymphoid cells were the most numerous, and the remaining constituents were in such quantity as might be expected from the source whence the material is supposed to come.

Animal lymph which had been collected in capillary tubes, and which was believed to be as pure as it is possible to obtain it, was next examined by the microscope, and found free from morphological constituents, except an occasional lymphoid cell and blood corpuscle.

If such, then, is the composition of the "patented cones," we may expect under favorable circumstances decomposition to occur, and it is therefore not surprising that we frequently hear of horribly sore arms following their use. We recently saw a

letter stating that these "cones" had been the cause of a good deal of irritation in some of the Western States, producing, in numerous instances, sloughs and very sore arms. Dr. T. S. Hopkins, of Thomasville, Ga., in a communication to the National Board of Health, tells of very painful results following the use of so-called "patent solid lymph cones." He says:

"Our town authorities have employed a physician to vaccinate all persons presenting themselves for the purpose. The 'virus' was furnished by the town, and procured from the New England Vaccine Company, Chelsea, Mass., as 'bovine matter.' The result has been fearful. Nearly every one vaccinated has suffered severely from erythema or erysipelas, the arm swollen from shoulder to wrist, and the point of puncture presenting the appearance of a sloughing ulcer, discharging freely sanious pus. Many of the cases have been confined to bed, with high fever, from five to ten days, requiring the constant application of poultices to the arm, and the free use of morphia for the relief of pain. It is rumored that the National Board of Health intends to distribute vaccine matter through the country. I deem it my duty to inform you of the result here from the matter used, and from whence it came. It came in 'cones' said to contain (each cone) enough to vaccinate 100 persons, at a cost of one dollar per cone. It 'takes' in all cases regardless of previous vaccination, as shown by well-pitted mark, and the inflammation begins frequently on the second day. Those who have tried it tell me they would much prefer to have small-pox" (*National Board of Health Bulletin*, March 4, 1882).

Such serious accidents tend to bring animal vaccination into undeserved discredit. For the sake therefore of the cause of animal vaccination, and for the better protection of the public against small-pox, we would strongly urge that all vaccination compounds, "powders," and "pomades," and even the bovine crust itself, should be avoided, and nothing but pure and unadulterated vaccine lymph be used.

Messrs. Codman and Shurtleff, manufacturers of surgical and dental instruments, are also engaged in the business of propagating bovine virus. Through the courtesy of the firm, we obtained permission to visit their stables, which are located at Stoughton, a small town a few miles distant from Boston. Dr. D. C. Rose, the superintendent, is a practising physician in the town, and consequently is able to give only a small portion of his time to the superintendence of the business. The stables and operating-room were not remarkable for cleanliness. The producers claimed to be propagating the Beaugency "stock" of virus, which they said was imported by them in 1871 or 1872. Dr. Rose informed us that they had lost their succession with their former supply and that they had more recently received importations from France of the same "stock" of virus. The doctor spoke very approvingly of retro-vaccination, i.e., humanized lymph passed again through the heifer, saying he had had better results in the human subject from animal virus produced in that way than from strictly humanized virus.



This firm is using animals from six months to three years old. The inoculations are made on the belly of the heifer, immediately in front of the udder. Lymph sufficient to charge 700 to 800 points is considered a fair yield, though as many as 3,000 points are sometimes taken from one heifer. The lymph is collected from the seventh to the ninth day of the vesicle, and usually on ivory points. Codman and Shurtleff also make what they call "capsules." These consist of two small pieces of glass, one of which is thicker than the other and contains a cup-shaped excavation on one side; this is filled with a paste, made by rubbing down with glycerine the first crust that forms, and which is removed prior to the dipping of the ivory points. Surely such a compound must frequently prove inert, and is scarcely less objectionable than the patented cones already referred to. Crusts, also, and sometimes capillary tubes, are supplied to the trade.

Dr. S. H. Durgan, whose name appears in the *National Board of Health Bulletin* in the list of persons engaged in the business of bovine-lymph culture, is in fact not a producer. He is President of the Board of Health of Boston. The bovine virus used by the Board for gratuitous vaccination is obtained indirectly from the "New England Vaccine Company." Only ivory points are used; "cones," never.

(To be continued.)

## REVIEWS.

EPILEPSY AND OTHER CHRONIC CONVULSIVE DISEASES: THEIR CAUSES, SYMPTOMS, AND TREATMENT. By W. R. GOWERS, M.D., F.R.C.P., etc. pp. 309. London: J. & A. Churchill, 1881.

Some years have now elapsed since a special treatise on epilepsy has appeared. The works, valuable in their day, of Sieveking, Russell Reynolds, and Echeverria, have become more or less antiquated. A new treatise is needed, and fortunately a competent man has supplied it. Dr. Gowers has superior ability, and has had valuable training under Hughlings Jackson, Reynolds, and others, and special opportunities which he has utilized. The work is largely a record of personal observations.

Dr. Gowers does not regard loss of consciousness as essential; it is unvariable in all severe epileptic fits, but in minor seizures, "in rare cases, some consciousness may be retained." He gives an excellent description of the two forms of the disease—*epilepsia gravior*, *epilepsia mitior*, and narrates a number of striking examples of the automatic actions succeeding to attacks. Under the term "Hysteroid or Co-ordinated Convulsions," he described cases called by Charcot Hystero-Epilepsy. Dr. Gowers objects to the use of Charcot's term, which he regards as misleading. He also finds that Charcot's crucial test, compression of the ovaries, is rarely ever successful in England.

We turned with interest to the chapter on pathology to find the position of our author. He does not confirm the observation of Voisin in regard to the yellow pigmentation of the nerve-cells of the medulla oblongata, and thinks it doubtful whether Meynert's induration of the cornu ammonis is of greater value. In all his cases of epilepsy examined, the cornu ammonis was healthy, and in the two instances of disease of this part found by him there was no epilepsy. The epileptic seizure

consists in a sudden, explosive discharge of the energy stored up in the cells of the gray matter, according to Dr. Hughlings Jackson, and this is the theory adopted by Dr. Gowers.

The chapters on diagnosis, prognosis, and treatment are excellent. He places the bromides at the head of the list of remedies, and he gives excellent rules for their administration. He finds borax very useful, apparently next to bromides, and the zinc salts come third in order of beneficial effect. He finds picrotoxine useless. He has but little to say of trephining, and is certainly unaware of the results which have been thus obtained.

The mechanical execution of the book is good, as we always expect in the publications of the Messrs. Churchill.

## SOCIETY PROCEEDINGS.

### MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

#### PROCEEDINGS OF THE EIGHTY-FOURTH ANNUAL CONVENTION.

*Held in Hopkins Hall, of the Johns Hopkins University, Baltimore, April 11-15, 1882.*

(Specially reported for THE MEDICAL NEWS.)

FIRST DAY.—The meeting was called to order at 12 o'clock by the President, PROF. FRANK DONALDSON, M.D. The first business of importance was

#### THE PRESIDENT'S ADDRESS.

The President began by extending a cordial welcome to the delegates of the convention, at the same time expressing his regret at the want of interest in these meetings hitherto shown by members in the counties. He hoped that the increased amount of work and activity manifested of late by the Faculty would so stimulate them to take their proper part in the proceedings that the Faculty might become in reality a State Medical Society. He suggested the appointment of a committee to assist in the organization of county associations, and to urge upon members of the profession throughout the State to attend and take part in our convention. Reference was made to the deaths of distinguished members during the past year, Dr. S. P. Smith, of Cumberland, formerly President of the Faculty; Prof. E. Lloyd Howard, and Dr. J. D. Thomson, being mentioned by name.

In speaking of the work of the last convention, the President dwelt specially upon the importance of biological research, and suggested that it would be well for the Faculty to appoint an additional standing committee on the recent advances in this branch of science, and to offer prizes for the encouragement of original investigations in experimental physiology and experimental therapeutics.

The late changes adopted by the New York State Medical Association in their Code of Ethics, according to which consultations are allowed between its members and all "legally qualified" practitioners, was considered almost inexplicable, and was strongly condemned as being at direct variance with the Code of Ethics of the American Medical Association. "The outside public, who persist in seeing no difference in what they call the several schools of medicine, consider it as inaugurating a very liberal policy; but to the medical community it appears irreconcilable with common sense and honesty. No intelligent consultation is possible between a scientific practitioner and the professed believer in the potency of infinitesimal nihilitics, or with Thomsonians or eclectics, or with men who profess to have discovered the elixir of life or panaceas for all diseases, all of whom in our State

are 'legally qualified' practitioners." The President suggested that the convention "reaffirm our adhesion to the Code of Ethics of the American Medical Association."

Passing to the subject of the International Medical Congress in London, the President considered that it showed the drift of the medical thought of the day that the chief applause there was given not to any great practical physician or surgeon who had discovered some specific or a new operation, but to M. Pasteur, whose work belongs altogether to the domain of preventive medicine. He desired to call especial attention to the very suggestive papers on the germ theory of this veteran investigator as being of great interest and certain to prove of great practical value in connection with the so-called zymotic diseases. All discoveries in science must prove, sooner or later, of substantial use, and they are short-sighted utilitarians who draw invidious distinctions between scientific studies and what they call practical observations. The discovery of Cagniard de la Tour that yeast is a plant belonging to one of the lowest types of fungi became the starting-point for Pasteur's investigations, and suggested that putrefaction and other kinds of decompositions may be really due to a new arrangement of elements brought about by the development of germinal particles deposited by the atmosphere.

The attention of the Faculty was then called to a paper that had been presented to it in 1878 by the speaker, on Spontaneous Generation, based upon the researches of Tyndall, Burdon-Sanderson, Kock, Wyman, and others. In this paper he had shown that life never appears independently of antecedent life, even in the lowest possible form of animal or vegetable; no organic fluid can undergo spontaneous fermentation or decomposition, even in the presence of atmospheric air; any such action originates and is maintained by the developmental action of definite germs. Pasteur, with Tyndall, further established the fact that different kinds of fermentation are produced by organic germs of different species. Many different kinds of germs, especially the bacteria, are habitually floating in the air, so as to be almost certainly self-sown in any organic fluid freely exposed to it. It has been further established that the most readily decomposable organic fluid may be freely subjected to air from which the germs have been eliminated (or deprived of their vitality) without undergoing change. When dried, these germs maintain their germinal power for indefinite periods, starting into renewed life and activity when the requisite conditions are present. Antiseptic surgery is one of the first fruits of the practical application of these principles to medicine. They enforce, also, the great value of cleanliness and purity of the air for the sick.

The different steps taken by M. Pasteur in the progress of his investigations on the minute vegetable organism which causes splenic fever in animals, and malignant pustule in man (*bacillus anthracis*), were then graphically traced. The statement of Dr. Granitz was quoted that some even of our domestic microphites may be changed by artificial culture into disease germs of deadly infection. Benign, harmless micrococci are rendered virulent and destructive of life by mal-sanitary influences, as foul air, excessive heat, filth, darkness, etc.

Pasteur has further discovered that by artificial culture he can so reduce the virulence of the *bacillus anthracis* that a very mild form of splenic fever will be induced by inoculation with it, and claims that animals who have thus been "vaccinated" with the virus are protected against the severer form. Prof. Greenfield and M. Toussaint have, from their experiments, arrived at the same conclusion. Pasteur experimented on a

flock of fifty sheep, half of which, by previous "vaccination," had gone through a very mild attack of splenic fever. He inoculated the whole flock with the strongest virus, with the prediction that the "unprotected" half would speedily die, and the other half escape unhurt, which prediction was fully verified. Reference was then made to further experiments on Pasteur's lines, that are being conducted by Drs. Klebs and Thomasi Crudeli, in respect to marsh-malaria and also to tubercle. The President thought that, while it is still too soon to arrive at confident conclusions, there is ground for great hopes that much will be accomplished in the prophylaxis of zymotic diseases in the line of Pasteur's methods. Jenner's discovery led the way long since to such a brilliant result.

Proceeding to the subject of vaccinia, he showed how this virus, after successively passing through the human body a number of times, lost to a considerable extent its potency, and that in this way the anti-vaccinators had been given a handle to work on. Happily the virus loses none of its power in transmission through heifers, and when taken from the heifer direct, the true Jennerian vesicle, as claimed by Dr. Martin, is produced. The experience with this virus in this community during the late visitation of small-pox has been most satisfactory. The spread of the disease was most effectually checked. Although Dr. Martin offered a considerable reward in all the principal cities in the Union for information as to the occurrence of any case of small-pox within ten years after thorough vaccination with his heifer lymph, he informs us that it has never been claimed.

The President concluded by thanking the Faculty for the honor conferred upon him in electing him to that office, and asking for their kind indulgence to him while presiding. The

#### CORRESPONDING SECRETARY,

Dr. J. E. MICHAEL, read letters from Prof. William Goodell, M. D., of Philadelphia, and Prof. J. W. Mallet, of the University of Virginia, accepting their election as honorary members of the Faculty.

The presence on the platform of George E. Ranny, M. D., Secretary of the State Medical Association of Michigan, was announced.

Dr. I. E. ATKINSON, Chairman of the

#### LIBRARY COMMITTEE,

read a report, showing great increase in the efficiency of the library in the past year, especially in the direction of periodicals, one hundred and eighteen of which, including twenty-five foreign ones, are now taken. It was also stated that a number of foreign societies, to whom copies of our transactions last year had been sent, had responded by sending us their published transactions in return. Many articles of antiquarian interest have been presented to the library, and three hundred and twenty volumes have been added, chiefly by donation. The necessity of an increased appropriation for the use of the library was very strongly urged.

Dr. W. F. A. KEMP, Chairman of the

#### COMMITTEE ON MEMOIRS,

read short obituary notices of the members deceased during the year, which were supplemented by an eloquent tribute to the memory of Prof. E. Lloyd Howard, by his friend and colleague, Dr. T. S. Latimer, and also one from Dr. Christopher Johnson, Jr., on Dr. S. P. Smith, of Cumberland.

#### REPORT OF THE SECTION ON SURGERY.

Dr. L. McLANE TIFFANY stated that in consequence of the resignation of the former chairman, and his own very recent appointment, he had no regular report to

present. He showed a case of a man aged twenty, on whom he had successfully performed amputation at the hip-joint, in November last. The disease was small-celled sarcoma, cause unknown; of eighteen months' duration. It formed a fusiform, semi-fluctuating, and painful tumor, eight inches long and about the same across, attached to the left femur. In order to test the diagnosis, the man was put upon antisyphilitic treatment; soon after, as he was walking in the ward, the bone gave way, revealing the true nature of the disease, and amputation was performed at the hip-joint. The operation was performed by transfixion and lateral flaps. At six weeks a small abscess formed at the upper end of the incision. There is still some discharge, and the patient refuses to have the opening healed; otherwise there is a well-formed cicatrix. This is the second successful case of this operation in Baltimore, in civil practice.

DR. TIFFANY then presented a paper on

#### THE TREATMENT OF CANCER IN THE RECTUM.

This is one of the most insidious and painful of all diseases. To make a diagnosis of it has been, moreover, almost equivalent to making a prognosis of a slow and continually aggravated disease, and a certain death in the not distant future. Now, however, we are in a condition to do more for it than simply to allay pain, we may greatly help the case, and, in some instances, even cure it. The disease is generally epithelioma; as the mucous membrane here consists of columnar epithelium, so the malignant epithelial formation shows cells of the same kind. Exceptionally only does the neoplasm resemble its analogue—cancer of the lip—and then it will be found to commence at the junction of the skin and mucous membrane upon the verge of the anus, where squamous cells exist. Like epithelioma of the lip, it advances more slowly than the other carcinomata, and involves the surrounding structures more slowly; it is general within the anus, removed from sight, and makes its existence first known by constant irritation, itching, muco-purulent discharge, then purulent, with or without blood, straining at stool, the diarrhoea alternating with constipation, with intense pain on defecation, and finally a slow death. It is sometimes painless in old age. As the rectum itself is insensible to pain, the disease does not at first attract much notice, and is generally supposed to be piles. It is too much a custom among physicians to accept the statement of the patient as sufficient evidence of the existence of piles, and to take no pains to verify the diagnosis. This is a very unfortunate fact, for the great mortality in cases of rectal cancer is undoubtedly owing to the fact that its existence is not ascertained sufficiently early. It is now only recognized when the symptoms are sufficient to call decided attention to it. Cases recorded of nascent cancer in this region are rare. But if epithelioma of the lip be curable, why not epithelioma of the rectum, which resembles it in so many particulars? There must be prodromata. Did the rectum receive a tithe of the special attention given to the vagina and uterus, the disease might become far less formidable.

When discovered, how is it to be treated? Cured, if possible; if not, palliated. Excision of the rectum is one of those operations which, having succeeded at first, was used in unsuitable cases afterwards with unfortunate results, and then fell into oblivion, to be revived again and put in the proper place in surgery. It is an undoubtedly good operation if carried out under proper restrictions, and done in suitable cases. A cancerous growth to be thus treated must be small, freely movable upon the subjacent parts, and should not be accompanied by secondary growths in the groin, iliac fossa, liver, or elsewhere. What is meant by "small" is this, that it be not so large as to require more than three inches of

the gut posteriorly, or two inches anteriorly, to be excised. The excision of more than this amount would be contra-indicated, because it would involve the peritoneum. As cancers are, of course, surrounded by small-celled infiltration, which is already impressed by the morbid growth, the finger should be able to detect healthy tissue beyond the growth, but yet below this level, if the operation is to be performed. Further, the cancer must be entirely rectal, and not project into the rectum from the surrounding tissue.

Dr. Tiffany recommends in performing this operation to make two semilunar incisions, so as to enclose the anus, the distance from the verge depending upon the situation of the cancer. These cuts are deepened and the rectum gradually drawn down. The finger may be used to free the rectum from its connections if required, or the cautery, and a central deep cut backwards to the coccyx will give more room, while it affords freer discharge for subsequent drainage. The gut being drawn down as much as desired, it is stitched to the skin, and divided as far as possible above the growth within the limit of safety, or it may be divided and stitched to the skin. The rectal wall being very vascular, it is well to cut it with Paquelin's cautery. If as much as three inches of the rectum be cut away posteriorly, it is not easy to unite the bowel at this point to the skin. Good results follow, however, even if a large gap intervene. Hæmorrhage is free, but controlled by ligature and hot water applied by Davidson's syringe. After-treatment consists in strict cleanliness, irrigation, etc. If wounds should have been made on an adjoining viscus, they must be treated on general surgical principles. Pelvic cellulitis or septicæmia, the most frequent causes of death after this operation, are best prevented by frequent irrigations. Should the perineum have been opened, it should be sutured. The operation being on the rectum, it is difficult to see how Listerism could be applied. But carbolyzed water is good. Kelsey's analysis of 140 excisions (*N. Y. Med. Journal*, December, 1880, p. 608), shows that the operation causes at least great respite, and sometimes a cure. Deducting the cases fatal from the operation itself (22) and those who passed from observation, there remained 100. Of these, 31 were doing well a year after the operation; 6 were quite well ten years after. As the average duration of the disease is but two years, the operation certainly should be undertaken in suitable cases. Incontinence of feces follows in only about one-fifth of the cases.

Dr. Tiffany then related a case of a female, unmarried, æt. 47, who had had three years previously a tumor removed from over the sacrum; had had discomfort about the anus for about a year. Three months since she had learned that she was suffering from rectal cancer. Dr. Tiffany found a saddle-shaped growth, its seat resting against the sacrum. It affected almost the entire circumference of the rectum, but did not quite meet in front. It was freely movable, there were no glandular enlargements, general health good. It extended nearly three inches behind and one and a half inches in front. The operation was undertaken February 27, 1882, and proceeded with as above described. It was found impossible to unite the posterior portion of the rectum, after the excision, to the skin. Temperature on third day touched 103° Fahr., sixth day was normal. She leaves this week for her home. The feces are well retained, except when fluid.

If the operation be impossible, it is of the first importance to relieve the symptoms. The pain caused by defecation is so great that the patient defers going to stool as much as possible. The passage of hard, impacted feces causes absolute agony. So, even while opiates are exhibited, soft evacuations every day should be secured. As long as the rectum is fully open injections do good, but after the calibre becomes small they



cease their good effect. Still, they are sometimes necessary to clear away hardened masses of fecal matter. Bougies cause irritation and great pain and are useless. Iodoform suppositories give relief, but should not be continuously used. Opium is our chief agent. Linear rectotomy, division of sphincter and rectum back to coccyx and sacrum, has been found by Dr. Tiffany to give great relief. As the rectum becomes occluded, it becomes a question—shall colotomy be performed. It can of course only relieve the pain of the patient, and prolong life somewhat. But the inconvenience of the artificial anus is more than counterbalanced by the ease given to the patient. Dr. Tiffany has performed this operation three times. In two cases the patients afterwards have succumbed to the disease. Two of these were reported in the *American Journal of Medical Sciences*, October, 1877. The third was performed a month since with success.

DR. GEORGE H. BOYLAND read as a supplement to the Report on Surgery a paper entitled, *Contributions to the Study of the Fractures of the Inferior Extremity of the Radius*.

The meeting then adjourned.

#### APRIL 12TH.—SECOND DAY.

After some routine business, Mr. William H. Howell A.B., of the Johns Hopkins University Laboratory read

A REPORT OF SOME OBSERVATIONS UPON THE FORM OF THE PULSE WAVE AND THE MEAN ARTERIAL PRESSURE IN A DOG WITH PATENT DUCTUS ARTERIOSUS, BY WILLIAM H. HOWELL, A.B., AND F. DONALDSON, JR., A.B.

In the course of experiments upon the isolated mammalian heart, a dog came under the notice of these gentlemen, evidently suffering from some form of heart disease. Tracings were taken of the arterial pressure and the form of the pulse wave. Afterwards at the post mortem a patent ductus arteriosus was found, establishing a very wide communication between the aorta and the pulmonary artery. There was also apparently some insufficiency of the mitral and pulmonary valves. The aorta from its origin to the bend was considerably dilated, though there was no evidence of any atheromatous changes. Weight of heart 97 grammes, showing general enlargement when compared with hearts of other dogs of similar weight (15 to 18 pounds), which would be about 66.5 grammes. There was some hypertrophy of the walls of left ventricle.

At the opening of the ductus arteriosus into the aorta there was a small valvular fold, not nearly large enough to close the mouth of the ductus, but so placed as to direct the stream of arterial blood sent out from the left ventricle at each systole along the aorta and prevent it from passing into the pulmonary artery, acting apparently something in the same way as the Eustachian valve in the fetal heart. After the completion of the systole, however, when the elastic recoil of the aorta had set in, this fold could not have had any influence in preventing the passage of arterial blood back into the pulmonary artery, indeed would rather have directed any back current in that direction. The only recorded case of this form of disease found was the one reported by Dr. Hilton Fagge in *Guy's Hospital Reports*, 1873. The rate of the pulse was found to be 140 per minute. The impulse was much increased, and the apex of the heart extended much further to the left of the sternum than normal, showing marked hypertrophy over the whole cardiac region. There was a loud rasping systolic murmur with maximum intensity over the base, also a slight murmur with the second sound.

The tracings were taken from the femoral artery by means of a Marey's sphygmograph. The most favorable obtained, when the animal was perfectly quiet,

were found, upon comparison with the sphygmograms taken from the same artery of a healthy dog, to be entirely normal. The femoral arteries were then laid bare and a canula introduced into each of them, one of the canulas was connected with an ordinary mercury manometer which served to register arterial pressure, the other was connected with a Fick's federmograph. The pens of these manometers wrote upon the roll of paper of the kymograph in the same vertical line; a chronograph pen marking seconds, and a Marey tambour for registering respiration, were also made to write upon the same roll of paper.

No anaesthetic was used at first; afterward chloroform was given. It was noticed that when the animal was deeply under chloroform the heart lost entirely an arhythm which was very noticeable when the dog first came under observation, indicating that it had been caused by psychic influences. Nothing abnormal was found. Arterial pressure was good, ranging from 140 mm. to 150 mm. of mercury, *i.e.*, within the limit of normal blood pressure of a dog. Pulse rate 156 to 180 per minute. The form of pulse wave given by the Fick manometer showed a sudden rise of pressure at the beginning of the wave, corresponding to the sudden ejection of blood from the left ventricle into the aorta at each systole, and then a much more gradual fall of pressure as the excess of blood in the arterial system was gradually forced through the capillaries into the veins, resembling the sphygmographic tracing. The wave was markedly dicrotic, but according to Fick this is the normal characteristic of every true tracing of the pulse wave in the dog.

It is especially worthy of notice that the animal kept up such an excellent arterial pressure. *A priori*, it would have been expected from the free communication between the vessels in the lungs and the systemic circulation that there would be a marked and permanent lowering of the general blood-pressure. That this did not occur, must be explained by a compensatory increase in the force of the heart-beat, or by increased peripheral resistance.

The pressure in the pulmonary arteries must have been from three to four times greater than normal, requiring an increased beat of the right ventricle to overcome the extra resistance, and causing a greater amount of blood to flow through the lungs into the left side of the heart. It does not seem probable that there was any serious escape of venous blood into the systemic circulation.

MR. FRANK DONALDSON, A. B., of the Johns Hopkins University Laboratory, then read a paper entitled,

THE INFLUENCE OF INCREASE OF VENOUS AND OF ARTERIAL PRESSURE UPON THE CARDIO-INHIBITORY ACTION OF THE PNEUMOGASTRIC NERVE. BY DR. HENRY SEWELL, ASSOCIATE IN BIOLOGY, JOHNS HOPKINS UNIVERSITY, AND FRANK DONALDSON, JR., A.B.

The following fact was brought out in the course of the researches of these gentlemen, *viz.*, that increase of intra-cardiac pressure weakened or annihilated the cardio-inhibitory power of the vagus. If, for instance, by using a certain strength of stimulation of the vagus, with normal intra-cardiac pressure the heart-beat be slowed one-half, by an increase of the intra-cardiac pressure, the same strength of stimulus causes a slowing of only one-third in the rate of beat, or may, indeed, completely subvert the cardio-inhibitory function of the vagus, which, however, again becomes apparent after lowering the pressure.

Increased pressure within the heart, during the systole of the ventricle, is caused if we clamp the aorta or constrict its bore. Increased intra-cardiac diastolic pressure of the whole heart is brought about whenever the blood flows into the venous side of the heart under

higher pressure. The intra-cardiac diastolic pressure of the ventricle alone is increased by insufficiency of the semilunar valves. It is highly probable that like conditions should have unlike effects upon the activity of the heart, according as they are applied during systole or diastole.

The animals chiefly employed were the frog and the terrapin. In these creatures the heart consists of four separate chambers, viz., a single thick-walled ventricle, two auricles, and a venous sinus, formed by the confluence of the great cardiac veins, which receives the venous blood and communicates with the right auricle. The left auricle has no connection with the sinus, and receives blood from the pulmonary vein. The animal being beheaded and pithed, one canula inserted into the inferior cava, and all other vessels connected with the heart being tied, a mixture of one volume of whipped calf's blood to two of 75 per cent. of salt solution was used to nourish the heart. The blood flowed from a Mariotte's bottle into the venous canula under a constant pressure, which could be varied at will by raising or lowering the flask. The arterial canula was connected with a T tube, one limb of which communicated with a manometer; the other limb was connected with an open rubber tube, through which the blood passed out of the heart. Arterial pressure could be varied by raising or lowering this tube. Both vagi were so prepared that either could be put upon the stimulating electrodes.

I. *Effect of Variation of Venous Pressure, Arterial Pressure Remaining Constant.*—In confirmation of the result obtained by a previous observer, it was found that a slight increase of the pressure by which the heart was filled from the flask diminished the inhibitory power of the vagus, when the strength of the stimulating current and the arterial pressure remained constant. That is, variations of venous pressure within what are, probably, physiological limits, affect the effectiveness of the cardio-inhibitory fibres of the vagus.

Venous Pressure.	No. Beats in 10 Seconds, without Vagus Stimulation.	No. Beats in 10 Seconds, with Vagus Stimulation.
2 cm.	5.4	3
5 cm.	5	4
8 cm.	5	5
2 cm.	5	3

II. *Effect of Variation of Arterial Resistance, Venous Pressure Remaining Constant.*—Variations of arterial pressure (that is, intra-ventricular pressure at the time of ventricular systole) has no effect on the vagus action.

II. *Effect of Variation of the Diastolic Ventricular Pressure.*—The arterial canula was pushed past the semilunar valves, until its end lay within the cavity of the ventricle. Increase of arterial resistance in this manner had no effect upon the vagus until blood had made its way backward through the auriculo-ventricular valves into the auricles, thus raising the pressure within them. This indicates, 1. That insufficiency of the semilunar valves, while greatly increasing diastolic intra-ventricular pressure, has no influence on vagus inhibition. 2. Although with this the resistance to the systole of the auricles is augmented, there is evidence that the peculiar effect on vagus action of increase of intra-cardiac pressure can only exert itself during diastole of the heart.

IV. *Variations of Pressure within the Sinus and Auricles together, the Ventricle being Excluded.*—The canula was either passed through the ventricle, whose base was ligatured round it into one auricle, or the ventricle was ligatured and cut away, and the outflow accom-

plished from the left auricle by a canula in the pulmonary vein. A slight increase of intra-cardiac pressure was soon shown in the diminished efficiency of the vagus. This effect comes out quite as well when the intact part is treated as a whole.

V. *Effect of Variations of Pressure within the Venous Sinus alone, the rest of the Heart being Excluded.*—A ligature was in this case tied between the sinus and the auricular part of the heart. Increase of intra-sinus pressure lessens the efficiency of the vagus in the same general manner as is considered above. Thus, variation of intra-cardiac pressure has a very marked effect in modifying the intensity with which the cardio-inhibitory fibres of the vagus act on the heart. It has been shown that increase of systolic pressure in the ventricle is not the cause of this influence on the vagus action. It has been made probable that the result is not due to increase of systolic pressure within the auricle, and therefore that the whole heart is affected in this respect by variation of intra-cardiac pressure only during its diastole. It has been found that increase of pressure within the ventricle at its diastole, such as would follow from semilunar insufficiency, has of itself probably no effect on the vagus action. All the effects which variation of intra-cardiac pressure have upon the efficiency of the vagus can be reproduced on the auricles and sinus together, or upon the sinus alone.

A large number of experiments of the same kind have been made upon the dog; but, though some decided intimation has been gained that in the mammal's heart also increase of the venous pressure diminishes the cardio-inhibitory efficiency of the vagus, the conditions of the mammalian heart are so difficult to regulate, and the vagus so quickly loses its irritability, that no satisfactory results have as yet been obtained.

MR. H. H. DONALDSON, A.B., of the Johns Hopkins University Laboratory, read a paper

ON THE VARIATION IN THE WORK OF THE HEART UNDER DIGITALINE. BY H. H. DONALDSON, A.B., AND M. WARFIELD, A.B.

The digitaline used was that of Merck, of Darmstadt. It has been shown that the heart is affected in the same way, whether it is isolated or not—Dybousky and Pelikan, Traube, Bochr, etc.

In mammals with brain and cord intact, the pressure in the arteries rises under moderate doses of digitaline—Boehm, Traube, etc.; denied by Winogradoff. The rise might be due to more work done by the heart, or to a narrowing of the arterioles, or in part to both. The arterioles have been observed to contract in a frog, brain and cord intact, under digitaline—Boldt, Briese-mann, Fothergill, Gouvat, etc.; denied by Böhm. It was found that if, in a mammal under digitaline, a section was made of the cervical cord, the pressure fell, not to rise again—V. Begold.

The complementary experiment was tried of first dividing the cord and then giving digitaline, but the arterial pressure did not rise—Traube, Böhm, etc.; denied by Görs and Ackermann. It would appear from this evidence that the rise of pressure was due to the arterioles—not to variation in the work of the heart.

In 1872 Dr. Rudolph, Böhm (Pfüger's *Archiv*) published a paper on the physiological action of digitaline, in which, relying on a series of experiments made directly on the isolated frog's heart, and his failure to see the constriction of the arterioles, he claimed that the work done by the heart under moderate doses of digitaline—.0005 gramme to .001 gramme—was increased.

He used the Ludwig-Coats method of feeding the heart. His inflow canula was put into the vena cava inferior, but the outflow was placed in the bulbous aorta below the semilunar valves, so that the entire weight of the arterial column bore continuously on the ventricle.

We used a method which has been perfected by Prof. Martin for feeding the isolated heart of the mammal. By this we were able to avoid many disadvantages connected with Böhm's method. By this means we were enabled to send first pure blood, then digitalized blood through the heart, and then pure blood again, changing no condition, save that represented by the presence of digitaline in the blood. The venous and arterial pressure were always within normal limits. The doses varied from .0003 gramme to .005 gramme in 100 c.c. of blood.

The heart was dosed and recovered from four to six times in each experiment, and the experiments lasted from five to ten hours.

We have records of forty cases of dose and recovery, of which eight are more or less imperfect. From the remainder we conclude that the work done by the isolated heart of the spider terrapin is always decreased by digitaline, and that the amount of decrease bears a rough proportion to the size of the dose; that with small doses there is an initial quickening of the pulse; that it is the percentage of digitaline, not absolute amount given, which is the important factor in varying the heart. Our main conclusion is contradicted by one series of direct experiments by Böhm, on the frog's heart, but is supported by all the experiments so far made on mammals.

The terrapin's heart being as good a starting-point, then, for an inference, as the frog's heart, we can infer that the work of the human heart is decreased by digitaline, and not increased, as has been sometimes claimed.

The Faculty then entered upon the consideration of an

#### AMENDMENT TO THE CONSTITUTION,

which had been proposed at the last convention, regarding the raising of funds for the library. After a long and animated discussion, it was decided that each member of the Faculty residing in the city be assessed eight dollars (\$8) yearly, of which four shall be appropriated to the Library Committee. The members in the counties shall be assessed three dollars (\$3), two of which shall be applied to the same purpose.

After the election of new members, one of whom was a colored man, the Faculty adjourned.

#### APRIL 13TH.—THIRD DAY.

The President introduced to the Faculty, A. M. FAUNTLEROY, M.D., of Staunton, Va., who delivered the

#### ANNUAL ORATION,

taking for his subject the reciprocal influence of morbid physical and psychical conditions on the nervous system. After preliminary complimentary remarks to the Faculty, the orator spoke of the great importance of bearing in mind, in the observation and treatment of disease, the correlative action of body and mind, which is the foundation upon which medical psychology reposes. Waiving any discussion on the subject of idealism and materialism, he would assume the existence in the human organism of a mental force associated with, yet superior to, the vito-physical energies therein manifested. "The passage from the physics of the brain to the corresponding facts of consciousness, is unthinkable." We know the facts, but of the real bond of union between mind and body we are in absolute ignorance. The varying conditions of these are constantly reacting upon one another. These points were enforced by a number of pertinent illustrations. He showed how morbid feelings nursed and cherished, especially in those without mental occupation, may lead to the most distressing results, impairing all the functions of the body, which, then reacting upon the mind, intensifies

the emotional disturbance, until every sensation assumes a morbid character, and the victim imagines himself a prey to all ills.

He traced the course by which a naturally nervous temperament, given up to long indulgence of emotional likes and dislikes, and to the baneful habit of self-consciousness and importance, loses at last all sense of social and ethical obligations. He spoke of the mental states in various diseases, such as gout, consumption, and hysteria. The changes thus far mentioned are not, however, those of insanity. Insanity, also, affords evidence of the reciprocal action of morbid bodily and mental influences. The morbid train of influences is usually long and complex, and is physical as well as moral. The air we breathe has been said to be full of psychological germs, calculated to infect the nervous system with disease. Heredity, and the various causes constantly at work to produce insanity in the different paths of life, were then touched upon, the disease being described as one from which neither genius nor strength of mind can guarantee us. He closed by referring to the great influence that the mind can exert over the body, and pointed to the example of this which America had given to the world during the past year.

A vote of thanks to Dr. Fauntleroy for his Address was passed unanimously, and he was elected an Honorary Member of the Faculty.

Dr. THOMAS B. EVANS, Chairman, read the *Report of the Section on Practice of Medicine*.

The *Report of the Section on Obstetrics and Gynecology* was read by THOMAS OPIE, M.D.

The *Report of the Section on Materia Medica* was presented by JOHN R. UHLER, M.D., Chairman.

The *Report of the Section on Sanitary Science*, was presented by Dr. JOHN MORRIS, Chairman. It was a

#### REPORT ON INFANT MORTALITY IN BALTIMORE,

with special reference to the diphtheria endemic during the past year in the Seventeenth Ward. The infant mortality of a city is a key to its healthiness. In nearly all cities the death rate among children is unnecessarily great. The report of the health department of this city for 1881, shows that out of the 8816 deaths for the year, 3919 or 44 per cent. were children under three years of age. Also, that 2467 or more than 28 per cent. of the deaths were from zymotic or preventable diseases. 630 of these were from diphtheria. In the Seventeenth Ward there were 280 deaths from zymotic diseases, of which 145 were from diphtheria. In the Tenth Ward there were but 3 deaths from diphtheria; in the Eleventh, 4; in the Eighth, 7. In respect to the sewerage, house-drainage, etc., the Seventeenth Ward bears a fair comparison with those wards in which there was no diphtheria or hardly any. The people of the Seventeenth Ward believe that the large infant mortality was caused, in a great measure, by the offensive odors produced by the fertilizing factories in the vicinity. These odors are due to what are called sludge acid acting upon dead fish and other animal matter. The odors are emitted during the mixing of the material in open tubs and other receptacles. These factories have been pronounced "dangerous to life and detrimental to health" by health boards in other cities, and their removal has been effected by legal means. People of the Seventeenth Ward have at last appealed to the courts. We know but little about the composition of the odors of the putrescent matter; we do know that many of these gases or their mixtures are hurtful to health. The gases from decaying fish are the most intensely stinking of all gases, and are probably the most deleterious to health; yet we cannot, by analysis, estimate the exact amount of the gas or its particular nature. Filth in the air is even worse than filth in the water, because less easy to escape from. The fact that in



the Seventeenth Ward, during the summer, windows and doors had to be kept shut when the wind blew from the factories, would of itself cause and favor the spread of disease. Other local causes were some open brick ponds and the noisome condition, at times, of the Cross Street stream. Milk is supplied chiefly from cows kept in the ward and fed on swill-slop. Diphtheria, wherever it occurs, is no doubt due to the decomposition of animal matter.

Dr. Morris then spoke of the fungoid theory of diphtheria and the influence of dampness on its production, stating it as his opinion that dampness, unless combined with filth, will not produce diphtheria, but is a necessary element in the generation of the poison.

Dr. Morris announced that the report on Sanitary Science would be supplemented by papers from Dr. William M. Kemp and Dr. W. Chew Van Bibber. The reading of these was deferred till to-morrow, and the meeting adjourned.

The President held a reception at his house for the Orator, A. M. Fauntleroy, M.D., to which the members were invited.

(To be continued.)

## CORRESPONDENCE.

### PRIVATE HOSPITALS FOR THE INSANE.

To the Editor of THE MEDICAL NEWS:—

SIR: In an editorial in the number of THE MEDICAL NEWS of April 15, 1882, on "Private Hospitals for the Insane," you refer to the application of the law in such cases.

The writer of this letter was one of the Committee appointed to prepare and urge upon the Legislature the adoption of the law of 1869, which regulates admission into hospitals for the insane, and well remembers the earnest discussions on the very point of the law to which you refer in the article, and the urgent necessity of providing against the very class of cases there discussed. The law was drawn so as to cover just such cases, and reference was made to this very plan of the reception of insane persons without the proper certificates. The section of the law reads thus: "Insane persons may be placed in a hospital for the insane by their legal guardians, or by their relatives or friends in case they have no guardians, but never without the certificate of two or more reputable physicians, after a personal examination made within one week of the date thereof, and this certificate to be duly acknowledged and sworn to or affirmed before some magistrate or judicial officer, who shall certify to the genuineness of the signatures and to the responsibility of the signers."

Now, any building or institution in which insane persons are kept for treatment under the care of a medical man is to that extent a hospital, no matter what other name may be given to it, and must by clear and necessary inference be amenable to the provisions of the law, and such was the clear intention of the framers of the law and of the Legislature which passed it.

We hold it to be a point about which there should be no dispute—that no person suffering from mental disorder should be placed under medical care and treatment in any home or institution unless all the terms of the law are fully and strictly complied with. There are cases constantly arising in which a question may be brought forward as to the actual fact and character of the mental disorder, but it is to just such cases that the provisions of the law need to be most carefully applied, for the obvious reason that the doubt should be settled before the person is sent to an insti-

tution, to avoid all the troubles and difficulties so likely to arise in regard to the detention of the individual.

I am, yours respectfully,

J. C.

WARREN, PA., April 17, 1882.

## NEWS ITEMS.

### BALTIMORE.

(From our Special Correspondent.)

THE MEETING OF THE MEDICO-CHIRURGICAL FACULTY.—Your reporter has, doubtless, acquainted the readers of THE NEWS with the proceedings of the Medical and Chirurgical Faculty of Maryland, at its eighty-fourth annual convention, just concluded. The session was one of great interest, and must have produced results of permanent value. The forthcoming volume of the *Transactions* promises to take high rank among publications of a similar nature. Of especial importance were the contributions from the biological laboratory of the Johns Hopkins University, and particularly the paper of Prof. Martin, showing that variations in the pulse-rate of isolated hearts of dogs, and, presumably, of mammals generally, are independent of intra-venous or intra-arterial pressure within wide limits, but that variations of temperature of the blood produce constant and definite changes in the number of heart-beats. Dr. John Morris, from the Section on Sanitary Science, directed attention to the singular epidemic of diphtheria that prevailed in 1881 in the Seventeenth Ward of Baltimore, where upwards of a hundred and fifty deaths from this disease were reported during the year, while in neighboring wards, similarly situated and under identical conditions of soil, water supply, drainage, etc., but two or three deaths from this disease occurred. The prevalence of odors of putrefaction, emanating from a number of fertilizer factories in the vicinity, was popularly considered the exciting cause of the epidemic.

An action that cannot fail to exert a decidedly beneficial influence upon the profession of the city and State, was the definite provision for the medical library now under the control of the Faculty. This library is now in regular receipt of about a hundred and twenty-five American and foreign medical periodicals, and contains more than three thousand volumes.

The action of a local medical society in black-balling a candidate for membership on account of his color, has been reported through the public and medical press, and has been severely commented upon. The recent meeting of the Faculty was considered a favorable opportunity to correct the impression that any number of medical men in Baltimore would allow their prejudices to control their opinions to so great an extent as to cause them to consider a mere accident of birth a barrier to admission to a society having scientific aims. The friends of the gentleman concerned, both in justice to him and the good name of the profession, proposed him for membership in the Faculty, and he was elected without a dissentient voice. He is a graduate of Harvard Medical School of some years' standing, and is personally and professionally entirely unobjectionable.

### VIENNA.

(From our Special Correspondent.)

THE INFLUENCE OF THE EMPTYING OF BLOOD-VESSELS, AFTER ESMARCH'S METHOD, UPON THE RESORPTION OF FLUID SUBSTANCES.—Dr. Anton Wölfler has determined, by a series of experiments upon animals, that, after emptying the blood-vessels of a portion of the body, according to Esmarch's method, substances placed upon wounds situated upon the distal side of

the tube are not absorbed so long as the elastic band remains in place. Through further experiments, he found out that the entire bloodless part, throughout the constriction, remained free from these substances.

From these experiments, Wölfler considers himself justified in affirming that the danger of septic absorption is much lessened by the application of the Esmarch bandage and tube, and advises the occlusion of the wound before, or *immediately* after, the removal of the elastic ligature.

**NERVE-STRETCHING.**—At a recent meeting of the College of Physicians, Dr. Mikulicz, Universitäts-Dozent, summarized his experience in nerve-stretching. After reviewing the literature of the subject, Dr. Mikulicz spoke of eight cases of tabes, and one of multiple cerebro-spinal sclerosis, observed by himself. The conclusions drawn from the reported cases, and his own experience, are as follows:

Nerve-stretching gives a great percentage of cured cases in neuralgias, both trigeminal and ischiatic.

Less favorable results are obtained from stretching peripheral motor nerves. Important disturbances of motor function almost invariably result. The operation, therefore, in the latter class of cases is of doubtful value.

In general neuroses, especially in traumatic tetanus and reflex epilepsy, many brilliant cures have been effected. For this reason the operation, in this class of cases, is indicated as a last resort.

In affections of the spinal cord, and especially in tabes, up to the present time no case has been reported cured. Although, here and there, decided amelioration of many symptoms, in particular pain, specially tactile sensibility has been observed.

Upon ataxy, itself, the operation exercises a very doubtful influence, so that in tabes, nerve-stretching can be employed, not as a means of radical cure, but only as an expedient in abandoned cases, where pains are very severe.

**THE AMERICAN SURGICAL ASSOCIATION.**—The third annual meeting of this Association will be held in this city on Wednesday, May 31st, June 1st and 2d. Papers on interesting surgical subjects will be read by Profs. Cabell, of the University of Virginia, Moses Gunn, of Chicago, Hodgen, of St. Louis, Dawson, of Cincinnati, Briggs, of Nashville, Drs. Levis, of Philadelphia, Weist, of Indiana, and others. It is expected that the discussions on the subjects presented will be very full and interesting. There will also be an exhibition of surgical instruments and appliances by the prominent instrument makers of the country.

At the last meeting of the Association held at Coney Island, September 13 and 14, 1882, papers were read by Drs. R. A. Kinlock, of Charleston, S. C.; Henry F. Campbell, of Augusta, Ga.; J. H. Packard and S. W. Gross, of Philadelphia; E. M. Moore, of Rochester, N. Y.; and H. W. Brock, of West Virginia.

The officers of the Association are Prof. S. D. Gross, President; Prof. Jas. R. Wood and L. A. Dugas, Vice-Presidents; Dr. J. R. Weist, Secretary; Dr. J. H. Packard, Treasurer; Dr. J. Ewing Mears, Recorder; Council, Drs. J. C. Hutchinson, R. A. Kinlock, W. F. Briggs and J. W. S. Gouley; Committee of Arrangements for next meeting, Drs. J. Ewing Mears, Chairman, S. W. Gross and R. J. Levis.

Surgeons of the city and country are cordially invited to be present at the ensuing meeting of the Association.

**THE PUBLIC HEALTH.**—For the week ending April 8, the following additional items are presented: There were 2 new cases of *small-pox* reported in Brooklyn, but no deaths; 17 deaths in New Orleans; 13 new

cases sent to small-pox hospital at St. Louis, and 8 deaths in that institution; 2 new cases in Buffalo, but no deaths; 1 new case and 1 death in Detroit; and 1 death in Omaha, Neb. From *cerebro-spinal meningitis*, there were 8 deaths in Buffalo, the highest mortality reported in the past eight weeks; and 1 death in Wilmington, Del. From *croup*, 5 deaths in Brooklyn; and 1 each in St. Louis, New Orleans, Detroit, Wilmington, Del., and Omaha, Neb. *Diphtheria* caused 12 deaths in Brooklyn; 8 in St. Louis; 4 each in Buffalo and Detroit; 3 in the District of Columbia; 2 each in New Orleans and San Francisco; and 1 in Salt Lake City. *Typhoid fever* caused 5 deaths in St. Louis; 4 in San Francisco; 3 in Buffalo; and 1 each in Brooklyn, New Orleans, Wilmington, Del., and Salt Lake City. *Malarial fever* caused 8 deaths in Brooklyn; 4 each in St. Louis and New Orleans; and 1 in Buffalo.

*Scarlet fever* still continues prevalent in Brooklyn, the deaths for the week (31) being slightly in excess of the number for any of the preceding seven weeks. There is also an increased prevalence of the disease in St. Louis, the 13 deaths reported being an excess of 6 over the number for the preceding week. There were 8 deaths in Buffalo; 2 each in San Francisco and Detroit; and 1 in Wilmington, Del.

From *measles* there were 7 deaths in Brooklyn, the same as in the preceding week; and 4 deaths in Buffalo. From *whooping-cough*, 4 deaths in Brooklyn; and 1 each in San Francisco and Buffalo.

*Consumption* caused 41 deaths in Brooklyn; 16 each in the District of Columbia and St. Louis; 12 in San Francisco; 10 in New Orleans; 6 in Buffalo; 3 in Detroit; 2 in Wilmington, Del.; and 1 each in Davenport and Omaha, Neb. *Pneumonia* caused 20 deaths in Brooklyn; 10 each in Buffalo and San Francisco; 12 in the District of Columbia; 6 each in St. Louis and New Orleans; 3 in Wilmington, Del.; 2 in Davenport; and 1 each in Vicksburg and Detroit.

For the week ending April 1, there were reported in San Francisco, 2 deaths from small-pox; 2 from cerebro-spinal meningitis; 1 from croup; 3 from diphtheria; 1 from typhoid fever; 3 from scarlet fever; 6 from measles; 18 from consumption; and 10 from pneumonia.

The returns of deaths from prominent causes for the week ending April 15, are as follows:

*Small-pox.*—A gradual falling off in the number of deaths from this disease is to be noted. The maximum mortality appears to have been reached in Cincinnati, where the deaths were 41 against 50 for the preceding week. There is also a decrease in the mortality from this cause both in New York City and in Philadelphia. The deaths for the week were as follows: New York City, 5; Philadelphia, 8; Pittsburg, 5; Cincinnati, 41; Chicago, 20; Louisville and Memphis, 2 each; and Hudson Co., N. J., Wilmington, Del., and Dayton, O., each 1. There were 19 new cases reported in Pittsburg; 13 in Dayton, O.; 8 in Brooklyn; 3 in Richmond; and 2 in Louisville and in Milwaukee.

*Cerebro-spinal Meningitis.*—This disease caused 8 deaths in New York City; 2 in Philadelphia; 4 in Pittsburg; 2 in Chicago; and 1 each in Hudson Co., N. J., Milwaukee, Richmond, Va., Louisville, and Memphis.

*Croup.*—There were 8 deaths from croup in New York City; 10 in Brooklyn; 10 in Philadelphia; 3 in Hudson Co., N. J.; 3 in Milwaukee; 2 in Boston; and 1 in Louisville.

*Diphtheria.*—The mortality for the week from this cause was as follows: New York City, 34 deaths; Brooklyn, 17; 12 in Hudson Co., N. J.; Philadelphia, 8; Boston 9, and 10 new cases; Chicago, 11; Pittsburg, 3; Portland, 2; and Cincinnati, New Haven, Dayton, O., and Nashville, each 1 death.

*Erysipelas.*—There were 9 deaths from erysipelas in

New York City; 2 each in Brooklyn, Philadelphia, and Cincinnati; 4 in Boston; and 1 in Louisville.

**Scarlet Fever.**—An increase in the mortality from this disease is observed in New York City and Philadelphia. In the former city there were 75 deaths, in the latter, 9; 24 in Brooklyn; 7 in Hudson Co., N.J.; none in Boston, but 12 new cases; 2 in Cincinnati; 5 in Chicago; and 1 in New Haven. 16 new cases were reported in Milwaukee.

**Typhoid and Typhus Fevers.**—There were 25 deaths from typhoid fever in Philadelphia, the highest mortality recorded for many weeks. New York City reports 3 deaths; Hudson Co., N.J., 5; Boston and Indianapolis, each 2; Cincinnati, 4; and Brooklyn, Louisville, and Jacksonville, Fla., each 1 death. Two deaths from typhus fever were reported in New York City.

**Malarial Fever.**—There were 13 deaths from this disease in New York City; 2 in Philadelphia; and 1 each in Louisville, Indianapolis, New Haven, Wilmington, Del., Nashville, and Memphis.

**Measles and Whooping-cough.**—Measles caused 33 deaths in New York City; 6 in Philadelphia; 5 in Brooklyn; 6 in Pittsburg; 7 in Chicago; and 4 in Cincinnati. The deaths from whooping-cough were 18 in New York City; 5 in Brooklyn; 2 in Philadelphia; and 1 each in Boston, Providence, Wilmington, Del., and Portland.

**Consumption and Pneumonia.**—With a few exceptions, there has been a still further reduction in the deaths from both consumption and pneumonia. From consumption there were 113 deaths in New York City; 48 in Philadelphia; 35 in Boston; 34 in Brooklyn; 22 in Chicago; 13 in Cincinnati; 10 in Providence; 9 in Hudson Co., N.J.; 6 each in Indianapolis, New Haven, Louisville, and Wilmington, Del.; 5 in Richmond; 3 in Pittsburg; 2 in Jacksonville, Fla. From pneumonia, there were 99 deaths in New York City; 35 in Brooklyn; 36 in Philadelphia; 18 in Hudson Co., N.J.; 13 in Boston; 7 in Providence; 6 in Cincinnati; 5 in Richmond; 19 in Chicago; 3 each in Milwaukee, Indianapolis, and Portland; 2 each in New Haven, Louisville, and Memphis.

**HEALTH IN MICHIGAN.**—Reports to the State Board of Health, for the week ending April 8, 1882, indicate that diarrhoea and diphtheria increased, and that neuralgia, typho-malarial fever, influenza, measles and rheumatism decreased, in area of prevalence. Including reports by regular observers and by others, diphtheria was reported present during the week ending April 8, and since, at 18 places; scarlet fever at 7 places; measles at 5 places, and small-pox at 3 places in all, as follows: at Battle Creek, April 4th; at Flint (one case) and at Milford, April 8, 1882. It is unofficially reported that small-pox is present at Manistee.

**CONSUMPTION IN PROVIDENCE.**—The statistics of consumption in Providence, as given in the last two monthly reports of the City Registrar, show some very surprising and interesting results.

Dividing the population and the decedents from consumption into two classes, American and foreign, by parentage, the statistics show that in one class a remarkable change in the mortality from this disease has been going on in Providence during the last twenty-five years.

Thus, in the five years from 1856 to 1860, inclusive, of all the decedents from consumption in Providence, 56.45 in each 100 were of American parentage, and 43.55 in each 100 were of foreign parentage.

But in 1881 the proportions were 33.43 in each 100 of American parentage, and 66.57 in each 100 of foreign parentage.

The change has also been continuous through the whole period, each quinquennial period from 1856 to 1881 showing a regular decrease, from 56.45 to 33.43, in the proportion of decedents from consumption of American parentage, and a regular increase, from 43.55 to 66.57, in the proportion of those of foreign parentage. The population of the city in 1855 was 59 of American parentage and 41 of foreign parentage in each 100, while in 1880 it was 46 American and 54 foreign in each 100.

These figures would seem to indicate that during this period there had been an actual decrease in the mortality from consumption in the American population by parentage, and it might be inferred that there had also been a corresponding increase of consumption in the foreign population by parentage. But this does not necessarily follow. The actual results in the case must depend upon a comparison of the decedents from consumption of each class with the living population of each class at the same definite periods. This is given in the mortality report for March.

At four different periods we have had a census of the city, which showed the parentage of the population. Taking these periods and comparing the decedents from consumption, by parentage, with the population by parentage in the same periods, we find the following results for the city of Providence:

#### POPULATION OF AMERICAN PARENTAGE.

1856—One death from consumption in 268.2.  
1865—One death from consumption in 310.1.  
1875—One death from consumption in 415.0.  
1880—One death from consumption in 435.2.

#### POPULATION OF FOREIGN PARENTAGE.

1856—One death from consumption in 262.6.  
1865—One death from consumption in 248.8.  
1875—One death from consumption in 288.4.  
1880—One death from consumption in 268.0.

#### TOTAL POPULATION.

1856—One death from consumption in 266.  
1865—One death from consumption in 280.  
1875—One death from consumption in 336.  
1880—One death from consumption in 326.

The preceding figures show several important facts:

1. In regard to the total population, there has been a considerable decrease in the ratio of mortality in the twenty-five years past; from one death in 266 to one in 326 of the population in a year. In a population of 100,000 this decrease in the rate from consumption would amount to a decrease of 69 in the number of deaths annually.

2. In the population of foreign parentage the rate of mortality from consumption has changed only very slightly in the past twenty-five years. In a foreign population, by parentage, of 100,000, the rate of mortality from consumption in 1856 would give 380 deaths annually; the rate of 1880 would give 373 deaths annually. The rate of mortality from consumption in the population of foreign parentage in 1880 was almost exactly the same as the rate in the population of American parentage in 1856.

3. In the population of American parentage in Providence there has been a most remarkable change in the mortality from consumption during the last twenty-five years. In 1856, there was, in this population, one death from consumption in 268.2; in 1880, there was only one death in 435.2. This decrease in the rate of mortality has also been continuous during the whole period, as will be seen by the figures already given. Let us see the effects of this decrease.

1. There were 111 deaths from consumption, in 1880, in the population of American parentage in Providence;



if the rate had been the same as in 1856, the number of deaths would have been 180, instead of 111.

2. There were 211 deaths from consumption, in 1880, in the population of foreign parentage; if the rate in this population had been the same as in the American population, the number of deaths from consumption, in 1880, would have been 130, instead of 211.

3. In a population of American parentage of 100,000, the rate of mortality from consumption, as it was in 1856, would give 373 deaths in a year; while the rate as it was in 1880 would give only 229 deaths in a year.

It would be interesting to inquire into the causes of this diminution of consumption among a portion of the population of the city; and the reasons why this diminution is in one portion of the population and not in the other. But we may not pursue the subject further at this time.

**THE KENTUCKY STATE MEDICAL SOCIETY AND THE NEW YORK CODE.**—At the recent meeting of the Kentucky State Society, Dr. L. P. Yandell moved that a committee be appointed to express the sentiments of the Kentucky State Medical Association concerning the action taken by the eighty doctors representing the medical profession of the State of New York. The committee met and subsequently presented the following report:

*Whereas*, Resolutions have recently been adopted by the State Medical Association of another State subversive of the Code of Ethics of the American Medical Association,

*Resolved*, That the Kentucky State Medical Society regards the Code of Ethics of the American Medical Association as the best system of ethics for the guidance of honorable medical men now in existence, and that we hereby declare our unfaltering and firm adherence to its principles, and must deprecate any alteration at this time in its honored teachings.

*Resolved*, That our representatives at the approaching meeting of the American Medical Association be and are hereby instructed to give their votes and influence in favor of unqualified adherence and fidelity to the Code as it now stands.

**MUNIFICENT BEQUESTS.**—According to the will of the late Dr. Edward L. Beadle, over one hundred thousand dollars are bequeathed to numerous charitable and medical institutions of New York, of which the New York Academy of Medicine, the Association of the Alumni of the College of Physicians and Surgeons, and the Medical Department of Columbia College, each receive five thousand; his library is also given to the New York Academy of Medicine.

**TRANSLATIONS OF AMERICAN BOOKS.**—Prof. Samuel W. Gross's treatise on "Sterility, Impotence, and Allied Disorders of the Male Sexual Organs," is to be translated into the Russian language, and Prof. Duhring's treatise on "Diseases of the Skin" is being translated into Italian by Dr. A. Scambelluri, of Naples, and will be published at Naples.

**THE MEDICAL EDUCATION OF WOMEN AT HARVARD.**—The committee upon the medical education of women at Harvard College presented a report, upon which it was voted (13 to 12) that in the opinion of the Board of Overseers it was not advisable for the University to give any assurance or hold out any encouragement that it will undertake the medical education of women by Harvard College in its medical school.

**PROF. VON BRUNS**, the Director of the Surgical Clinic at Tübingen, who has long been in a state of bad health, has, at his own desire, been pensioned off after a ser-

vice of almost forty years. The Medical Faculty of the University have presented an address to him, in which his great service to surgery, especially as the founder of laryngeal surgery, are set forth.—*Med. Times and Gaz.*, April 1, 1882.

**DR. JOHN P. GRAY.**—The profession will be glad to learn that Dr. Gray continues to convalesce favorably. He rode out last Sunday for the first time since the attempt on his life.

**MEDICAL CONGRESS AT ATHENS.**—On April 18th a congress of Greek physicians and naturalists from all parts of the world met at Athens.

**SOCIETY OF THE ALUMNI OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA.**—At the annual meeting the following officers were elected for the year 1882: President, John L. Atlee; Vice-Presidents, Alfred Stillé, Meredith Clymer, W. S. W. Ruschenberger, and Thomas J. Gallaher; Treasurer, Thomas Holmes Cathcart; Corresponding Secretary, H. R. Wharton; Recording Secretary, Horace Y. Evans; Orator, Hiram Corson, of Penna.

To fill the vacancy created by the recent death of the treasurer elect, the executive committee have elected Dr. Charles M. Seltzer, 1530 Fairmount Avenue, Philadelphia.

**THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF MEDICINE BY RESEARCH.**—A meeting for the organization of this association, called by the Presidents of the Colleges of Physicians and Surgeons of London, was held in London on March 27, Sir William Jenner, Bart., presiding. In stating the objects of the association, Sir William Jenner said that, although there were a number of societies to which those who had made scientific researches might communicate their results, there was at present none to guide research, and this want he hoped this association would supply. It was not intended that the association should limit itself to any one object, but, being founded on a very broad basis, should carry on its work in all departments. He hoped it would exert its influence on the study of therapeutics, and investigate the effects of sewer gas and foul air upon the human constitution, and in such studies they would want the combined work of physiologists, pathologists, and chemists. Another subject that lay ready to hand was the influence of light, moisture, subsoil, infection, and injury upon tubercular disease. If such investigations were carried out by the right men in the right spirit he was confident the benefits to humanity would be incalculable. Every advance in physiology was a stepping-stone to an advance in pathology, for the latter is founded on the former; and he trusted the proposed association would aid and stimulate professed physiologists. Sir George Jessel, Mr. Spottiswoode (President of the Royal Society), Sir James Paget, Sir J. Lubbock, Prof. Tyndall, Sir Risdon Bennett, Mr. Erichsen, Dr. Andrew Clark, Sir Joseph Hooker, Dr. Acland, and Dr. W. B. Carpenter participated in the business of organization.—*Lancet*, April 1, 1882.

**MARES' MILK.**—Dr. Carrick, of St. Petersburg, has, according to the *British Medical Journal*, recently been in London with the view of making known to persons likely to take a practical interest in the subject, the result of some experiments which he has been carrying on in Russia as to the condensation of milk from the mares in the Steppes, with the view to the introduction of such condensed mares' milk for the purpose of infant alimentation, and as a basis for the manufacture of koumiss. It is well known that the composition of

mare's milk more closely resembles human milk than does cow's milk, and is, therefore, it is thought, likely to be much more useful for the purpose of infant feeding than the condensed milk now so largely used for the purpose. The process which Dr. Carrick has employed furnishes condensed and desiccated mare's milk, without the addition of any foreign substance whatever. The result of Dr. Carrick's experiments having been satisfactory, both as to the process of manufacture employed and as to the favorable results attained in the nutrition of infants and invalids, he hopes to be able to find means shortly of producing this novel element of infant alimentation on so large a scale as to afford the means for introducing it into general use. The project is one of considerable interest, and will, we hope, be successfully carried out.

**MALFORMATION OF THE MALE EXTERNAL ORGANS.**—In the *Gazette Medicale de Strasbourg*, Dr. Schrumpf, of Wesseling, describes a remarkable anomaly of the external organs in a male child. The penis and testes were enclosed in one common sac of integument, a scrotum, with a projection not one quarter of an inch long from its upper part, representing the prepuce. The urine issued during micturition from a very narrow opening in the prepuce. The corpora cavernosa could be detected on palpation, and appeared to be normal. The case is described as unique; but it is only an extreme form of the fusion of the integuments of the penis with the scrotum posteriorly—a result of arrested development of the genital tubercle. To remedy the malformation, when the child was a year old, the corpora cavernosa were raised from the scrotum with as much integument as possible, which was then severed from the scrotum, and united by sutures behind the penis, the scrotal wound being also sewn up. Circumcision was performed at the same time. The result was quite satisfactory.—*British Med. Journ.*, March 18th, 1882.

**THE SECRETS OF OUR PATIENTS.**—The *Journal de Médecine de Paris*, contains a letter from a correspondent detailing a hypothetical case, in which the medical attendant delivers a woman of a syphilitic child, when, to his knowledge, the father is exempt from the disease; and desires to know whether it is the duty of the medical attendant to inform the father of the nature of the disease from which the child is suffering. M. Diday replies to the letter, and maintains that such a case offers no exception to the general rule, that the secrets of our patients are inviolable. He points out that, when the child is born dead, as a rule, no questions would be asked; and, if any were, it would be sufficient to say that there was commencing putrefaction; but when syphilitic symptoms are manifested by the child after birth, he thinks the medical man can easily discover the real state of things; and he believes that it is only necessary for him to insist on the mother nursing the child herself, so as to avoid infecting anyone else; and should she herself show any symptoms of the disease, to submit herself at once to treatment, and to persevere in it actively and to the end. We may add, that we quite agree with M. Diday; any other view is obviously founded on a principle which would make one law for the husband, and another for the wife; for who ever heard of a medical man feeling himself bound to tell a wife that her husband had acquired syphilis?—*British Med. Journal*, March 18, 1882.

**PARIS FACULTY OF MEDICINE.**—Among the troublesome legacies bequeathed by Prof. Paul Bert on the collapse of his brief and turbulent hold of power, was one devised while *in articulo mortis* to the Faculty of Medicine. We announced some time since that Prof. Hayem had been authorized by a small majority of the

Faculty to exchange his chair of Therapeutics for that of Pathological Anatomy, vacated by Prof. Charcot on his appointment to the new chair of Pathology of the Nervous System. Hitherto the recommendations of the Faculty have always been complied with by the Minister of Public Instruction; but Prof. Paul Bert, without discussing the matter with that learned body, at once declared the chair of Pathological Anatomy vacant, and submitted to *concours*. Since he has been succeeded by M. Ferry, nothing has been heard either of the *concours* or the permutation of chairs; and the Faculty meeting again in council has presented a new list of three names to the Minister, in order that he may, as usual, choose one—this being indeed nominal, as the name heading the list has always hitherto been considered as chosen. The choice made has been fatal to M. Hayem's pretensions—many of the Faculty being much opposed to the principle of permutation of chairs. There were thirty voters present, the required majority being therefore sixteen. For the first place on the list M. Cornil received sixteen, and Prof. Hayem fourteen votes; M. Lancereaux was then placed second, and M. Grancher third.—*Med. Times and Gaz.*, March 25, 1882.

**MICRO-PHOTOGRAPHY.**—MM. ENCAUSSE and CANÉSIE have introduced such modifications into the method of micro-photography as now to be able to obtain photographs of objects magnified 6400 diameters.—*Union Méd.*, March 19, 1882.

**CREMATION OF DISSECTED BODIES.**—The Municipal Council of Paris, adopting the recommendation of Dr. Bourneville, advises the cremation of the remains of bodies employed in the different medical schools for anatomical purposes. From 1878 to 1880, 10,144 bodies were employed at the Ecole Pratique and in the anatomical rooms at Clamart for anatomical purposes.—*Gaz. Méd. de Paris*, March 11, 1882.

**THE FRANKLIN REFORMATORY HOME FOR INEBRIATES, PHILADELPHIA.**—After an uninterrupted service of ten years, Dr. Robert P. Harris has resigned the post of attending physician, and Dr. James Graham has been appointed his successor. The fiscal year of the Home ended March 31, with fifty-two inmates in the house. From 25 to 30 men are received monthly, and the average under care is from 45 to 50. The number of applications steadily increases, and was greater in the last year than in any former one. There is now no home in Philadelphia for inebriate women; such institutions have failed in our cities, as it has been found impossible to induce those of a better class to become inmates, or to reform those whose drunkenness is associated with other immoralities. The class of women known as snuff-chewers is ready to enter, but will not reform except temporarily. There are former inmates of the first, second, and third years of the Franklin Home who have never broken their pledges since they left.

**A NEW NEUROLOGICAL JOURNAL.**—The first number of the *Neurologisches Centralblatt*, published by Dr. E. Mendel, Privat Docent in the University of Berlin, appeared on January 27. It is a bi-monthly journal, and contains original articles and reviews on subjects relating to the anatomy, physiology, and pathology of the nervous system, mental medicine, and medico-legal questions.

**DEAF-MUTISM.**—Dr. BOUCHERON lately made a communication to the Medical Section of the Paris Academy, in which he expressed an opinion that the co-existent states of deafness and dumbness so often observed are owing to the compression of the acoustic

nerve. This compression is the result of the vacuum existing in the cavity of the tympanum. This vacuum causes the external air to press on the membrane, and thus on the ossicula, and finally on the liquid of the labyrinth and the nerve. By frequent insufflation into the Eustachian tube, M. Boucheron succeeds in destroying the vacuum, and thereby the pressure on the nerve, and deafness is cured. M. Boucheron has restored in some cases, to the apparently deaf and dumb, and even idiots, the faculty of hearing and of speech.—*British Med. Journal*, March, 18, 1882.

PROF. BROWN-SEQUARD has declined the position of Court Physician at Madrid.

CANADIAN BOARD OF HEALTH.—The Ontario Public Health Bill, which provides for the creation of a Provincial Board of Health, consisting of seven members, of whom at least four must be medical practitioners, two only receiving remuneration, has passed its third reading and becomes a law. Dr. Wm. Oldright, Lecturer on Sanitary Science in the Toronto School of Medicine, has been appointed Chairman.

LARGE BRAIN AND SKULL.—Dr. Christopher Tompkins, of Richmond, reports the autopsy of a negro man, aet. 32, twice a murderer and twice an inmate of the Central Lunatic Asylum, of Virginia, the first time for some months, the last time for nine years, terminating with his death. He was six feet two inches in height, of spare build, and died of rapid consumption. Two hours after death it was found that the brain weighed 70 ounces, its substance, as well as its membranes and the bones of the skull, appearing healthy. The dimensions of the skull were: Antero-posterior diameter, 8 $\frac{3}{4}$  inches; transverse diameter, 6 $\frac{3}{8}$  inches; vertical diameter, 6 inches; its weight was 3 pounds. The capacity of the cranium was equivalent to the bulk of over a pound more of clover seed than that of two typical skulls of a negro and Caucasian respectively, selected from a collection of 54, with a view to comparison. The excess was situated, however, chiefly in the posterior segment of the skull. This subject when sane, was characterized by stupidity; during his insanity he was a violent masturbator. It was estimated that, if the brain had been weighed immediately on its removal, and with membranes entire, it would have weighed 72 ounces.—*Tran. Med. Soc. of Virginia*, Jan. 1882.

RESOLUTIONS OF THE FACULTY OF JEFFERSON MEDICAL COLLEGE ON THE DEATH OF PROF. JOSEPH PANCOAST.—At a special meeting of the Faculty held at the College March 10th, the Dean notified the Faculty of the death of Joseph Pancoast, Emeritus Professor of Anatomy in Jefferson Medical College, which occurred on the 7th inst., and the following resolution was passed and directed to be published:

"The Faculty having heard with profound regret of the death of their late colleague, Prof. Joseph Pancoast, desire to record their sentiments, as follows:

Dr. Pancoast's connection with this institution as a professor extended over a period of upwards of a third of a century, having begun in 1838, when he was called to the Chair of Surgery, which he occupied until the re-organization of the College in 1841, when he was transferred to the Chair of Anatomy, which he filled with distinguished ability until 1873, when he was succeeded by his son, Dr. Wm. H. Pancoast. During all this time Dr. Pancoast's zeal as an earnest and accomplished teacher, his skill as a bold and brilliant operator, and his authorship of various important works, contributed largely to extend the name and reputation of the institution, not only at home, but in foreign countries. Warm and genial in his temperament and im-

pulses, he was always kind and affable in his intercourse with his pupils, and eminently popular as a lecturer; while his vast professional knowledge, his wide familiarity with men and things, and his practical common-sense views, rendered him a safe and valued adviser in the consultations of his colleagues. Socially, he was highly agreeable and companionable, adding to the ground-work of strong sense and a well-cultured mind, the charm and grace of manner of the well-bred gentleman, heightened and set off by his varied reading in different fields of literature. In his death the medical profession of the United States has lost one of its greatest and most honored members, and this College one of its most successful teachers, and most able supporters.

The Faculty of the College desire herewith to extend to the family of their late colleague their warmest sympathy in their bereavement."

## NOTES AND QUERIES.

### CERTIFIED THERMOMETERS.

To the Editor of THE MEDICAL NEWS.

Dear Sir:—I recently purchased a thermometer marked J. Hicks, London, No. 92,245, with a certificate from the Yale College Observatory, stating that on October 7, 1881, the thermometer had been compared with instruments in the observatory, and corrected as follows, etc. This certificate also states that mercurial thermometers increase their readings with age, and during the first year as much as one degree. The certificate does not say that the thermometer was in their possession one year. If it was not, of what value is such a certificate? Yours, truly,

D. G. M. TROUT.

DECATUR, ADAMS CO., April 6, 1882.

[In order to know the value of the observatory certificate in the above case, it must be known how long the thermometer was closed before it was graduated. It is usually the custom of the best makers to seal thermometers and lay them aside for a year or more before graduation, as by that time the contraction has mainly ceased; if, therefore, our correspondent can learn that this precaution was observed in the case of his instrument, the corrections by the observatory officials may be taken as representing the exact readings.

We believe the Winchester Observatory will receive packages of thermometers from manufacturers, seal them up, and keep them for a year, and then correct them, the length of time between manufacture and graduation being certified in their report.—ED.]

### OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 11 TO APRIL 17, 1882.

GARDNER, W. H., *Captain and Assistant Surgeon*.—Relieved from duty at Fort Concho, Texas, and assigned to duty at Fort McKavett, Texas, as Post Surgeon, relieving Surgeon Waters.—*S. O. 36, Department of Texas, April 10, 1882.*

BYRNE, CHAS. B., *Captain and Assistant Surgeon* (Fort Barrancas, Florida).—Assigned to temporary duty at Mt. Vernon Barracks, Alabama, during absence of Assistant Surgeon Cunningham.—*S. O. 41, Department of the South, April 12, 1882.*

FINLEY, *Captain and Assistant Surgeon*.—Having reported at these headquarters, is assigned to duty at Fort Concho, Texas.—*S. O. 35, Department of Texas, April 8, 1882.*

CORBUSIER, WM. H., *Captain and Assistant Surgeon*.—Assigned to duty as Post Surgeon at Fort Mackinac, Michigan.—*S. O. 67, Department of the East, April 15, 1882.*

KING, WM. H., *Captain and Assistant Surgeon*.—To be relieved from duty in the Department of the East, on receipt of this order, and then to proceed to his home. Granted leave of absence until further orders on account of sickness.—*S. O. 82, A. G. O., April 10, 1882.*

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.